Public Passenger Vehicle (PPV) Study Reports

April 26, 2023

1. **Chauffeur Conditions and Effects on License Holders**

2. **Effects on Passengers & the Chicago Economy**

3. **Public Chauffeur Survey Results Summary**
   - Public Chauffeur Survey Results are published as a dataset on the City of Chicago Data Portal

The City of Chicago's Department of Business Affairs and Consumer Protection (BACP) ensures Chicago's public passenger vehicles are safe, reliable and provide residents and visitors positive transportation options. BACP is committed to providing accessibility for all individuals, including people with disabilities.

- Laws governing City of Chicago public vehicles and public chauffeurs are available at amlegal.com and Chicago.gov/PublicVehicles.
- For questions, comments, or to join the BACP Public Vehicle (BACPPV) e-mail list to receive industry notices and other news, send an email to BACPPV@cityofchicago.org.

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City of Chicago

Department of Business Affairs and Consumer Protection (BACP)

Public Passenger Vehicle (PPV) Study

Chauffeur Conditions and Effects on License Holders

January 31, 2023

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1. Executive Summary

The City of Chicago (City) Department of Business Affairs and Consumer Protection (BACP) initiated the City's Public Passenger Vehicle (PPV) Study in 2020. The City conducted a competitive procurement and awarded a contract to Crowe LLP (Crowe) to prepare the study. The purpose of the PPV Study was to evaluate the state of the public passenger vehicle industry in the City of Chicago. The primary goal was to provide the City with data-driven analysis of conditions, based on available data. Based on analysis, this report also identified potential policy options and action steps for the City to consider in meeting transportation and economic goals.

This ***Chauffeur Conditions and Effects on License Holders*** report was the first report developed for the PPV Study. Below we summarize our analysis and key findings from this report.

Net Earnings of Full-Time Chauffeurs

Below are key results from Section 6. Results: Net Earnings of Full-Time Chauffeurs. This study acknowledges that PPV chauffeurs have varying statuses as independent contractors or employees, and chauffeurs operate for varying hours and have different motivating factors. For administrative and policy purposes, it is useful to analyze the earnings of the subset of chauffeurs who operate on an approximately full-time basis. The City prioritized for Crowe the goal to understand full-time chauffeur conditions in this study. The City's represented perspective was based on full-time chauffeurs being most likely to rely on providing PPV services as their primary source of income. There is significant diversity in part-time chauffeur profiles and variables. Given the importance of full-time chauffeurs from a policy and earnings standpoint, this report prioritized analysis of full-time chauffeur conditions. Consistent with the Internal Revenue Service's (IRS') definition of full-time, this study defined full-time chauffeurs as those who operated 30 hours per week or more *with passengers* during the City Data Study Period (see Figure 5 for City Data Study Period details).

Analyses primarily leveraged data reported to the City by Transportation Network Providers (TNPs) and taxi companies related to chauffeurs, trips, sessions, and compensation. Expenses are estimated using City information regarding fixed costs, such as licensing and registration, as well as IRS mileage reimbursement rates. Please see the Section 6a. Methodology and Assumptions for further discussion.

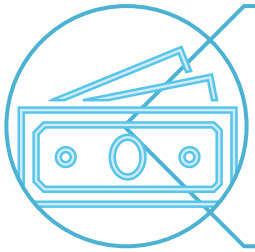
The graphic below summarizes key results related to full-time taxi and TNP chauffeur earnings. Compensation data for livery chauffeurs was not available for the study.

Full-Time Chauffeurs

- **Between 0.5% and 6.1%** of taxi chauffeurs operated ≥30 hours per week with passengers across the 12 weeks of the City Data Study Period
- **Between 0.25% and 6.05%** of TNP chauffeurs operated ≥30 hours per week with passengers across the 12 weeks of the City Data Study Period

Full-Time Chauffeur Earnings

- Full-time taxi chauffeurs earned **$2,270** per week on average
- Full-time TNP chauffeurs earned **$1,077** per week on average
- **1.6%** of full-time taxi chauffeurs earn <$20 per hour (after expenses) on average
- **0%** of full-time TNP chauffeurs earn <$20 per hour (after expenses) on average



Full-Time Chauffeur Expenses

- Full-time taxi chauffeurs are estimated to incur **$322** per week in expenses attributed to chauffeur operations
- Full-time TNP chauffeurs are estimated to incur **$427** per week in expenses attributed to chauffeur operations

Full-Time Chauffeur Net Weekly Earnings

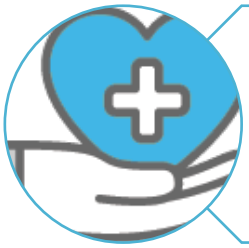
- Full-time taxi chauffeurs earned approximately **$1,948** in net weekly pay after estimated expenses, on average
- Full-time TNP chauffeurs earned approximately **$650** in net weekly pay after estimated expenses, on average

Other Chauffeur & License Holder Conditions

Below are key results from Section 7. Results: Other Chauffeur & License Holder Conditions. This section leveraged data reported to the City by TNP and taxicab companies, where available, and other public information. For additional context around chauffeurs' concerns and motivations, this report references key insights from the City's 2021 Public Chauffeur Survey.

Chauffeur Non-Monetary Benefits

- Taxi and TNP chauffeurs are most often classified as independent contractors and receive varying degrees of employment benefits
- Livery chauffeurs are most often employees and have access to employment benefits



Chauffeur Health & Safety

- 48% of taxicab, 41% of TNP, and 49% of livery chauffeurs identified "personal health (risk of illness)" as a "main concern" when surveyed
- 47% of taxicab, 66% of TNP, and 42% of livery respondents identified "personal safety (risk of crime)" as a "main concern" when surveyed

Chauffeur Supply

- Between March and April 2020 (at the start of the COVID-19 pandemic), there was an 84% decrease in active taxicab chauffeurs and a 73% decrease in active TNP chauffeurs

Trips Provided

- TNP and taxicab chauffeurs provided more than 650 million trips in the City of Chicago since 2014
- Between February and April 2020 (at the start of the COVID-19 pandemic), there was a more than 80% decrease in TNP trips in Chicago

Industry Challenges

- Stakeholders reported industry challenges related to industry competition, earnings and expenses, the impact of future legislation on gig economy workers, and safety / health considerations

Recommendations

The PPV industry is a significant part of the Chicago economy, serving as a relatively flexible earnings opportunity for chauffeurs and providing passengers with a means of traveling around the region.

A key takeaway from this study is that there is enormous variability among and across chauffeur conditions. Based on the City Data Study Period, a small number of chauffeurs drive full-time in some weeks, though they may drive only part-time or not at all in other weeks. The vast majority of chauffeurs in the City Data Study Period drove part-time, or fewer than 30 hours per week with passengers, in all 12 study weeks. Chauffeurs' motivating factors range greatly – some may drive to earn enough to serve as a primary source of income, and others may drive only when convenient for them or when they want to supplement other income sources. Chauffeur earnings also span a wide range, depending on pay models, when and how frequently the chauffeur chooses to drive, how much demand there is for trips while the chauffeur is working, and other factors. Because of this extensive variability, there is not a "normal" profile of a chauffeur in the City of Chicago.

This variability means it is critical for decision makers to consider the disparate stakeholder groups – and variable *individuals* within stakeholder groups – when assessing any policy or administrative change. As with most public policy, there may be intended and unintended impacts associated with a policy change. For example, if the City were to contemplate a policy related to conditions for full-time chauffeurs, the City should understand implications of such a policy on the part-time chauffeurs. In that example, the City should also consult with its legal advisors for appropriate guidance related to part-/full-time industry participation as it relates to employment and contractor status, treatment of expenses, and benefits.

The City should determine if any policy changes are needed related to Chicago's PPV chauffeurs or license holders, and carefully assess whether there may be unforeseen impacts to some stakeholders as a result of any potential change. Below, we outline three potential actions that the City may consider.

1. Expand Data Collection and Data Quality Processes

The City of Chicago regularly collects PPV industry data and posts these for public viewing on the City's open data portal. As part of its oversight responsibilities and licensing processes, BACP's legal authority includes requiring taxicab medallion and TNP company licensees to report their respective trip activity data to the City. The City data portal also includes livery, charter bus, and pedicab vehicle information within the public passenger vehicles and public chauffeur datasets.

The City may consider expanding data collection related to the PPV industry. For example, at present the City does not collect any shift duration data from taxis (something comparable to TNP session data). This limits the ability to analyze and understand the full picture of taxi earnings for all hours driven as a chauffeur. In addition, the City has limited data on other PPV industry vehicles, such as livery, charter buses, pedi-cabs, and others, which may limit future analysis and program assessments. Further, the Public Chauffeur Survey results suggest that PPV chauffeurs may increasingly be participating in other gig economy work, such as grocery and restaurant delivery services. The lack of data and visibility into the delivery industry may limit the City's ability to develop policies that support and protect gig economy participants.

The City may also consider implementing additional data review standards. Analysis of the City's data for this study revealed inconsistencies and quality issues that Crowe and the City discussed and resolved for purposes of this study. For PPV Study reports, Crowe controlled for data issues data filters and other data transformation steps as necessary; any data cleansing and manipulation implemented by Crowe was jointly agreed upon with the City. However, these data quality limitations may hinder additional analysis of PPV industry conditions. Therefore, the City may wish to review what is expected in terms of data quality from industry partners, as well as review and strengthen the City's internal quality assurance and quality control processes.

2. Review and Reassess All Fees Related to Chauffeur Licensing

The City may consider reviewing all licensing and other fees related to public chauffeurs to standardize and promote fairness across chauffeur types. As discussed in Section 4b. Licensing Costs, City fees and taxes are not uniform across the types of chauffeurs and PPV companies. Notably, the taxicab and livery fees and taxes are structured to apply to each vehicle or chauffeur, whereas the TNP fees and taxes are determined at the company (TNP platform) level.

3. Review and Reassess Requirements Related to Chauffeur Licensing

The Chicago City Council may have an opportunity to reevaluate existing requirements for chauffeur licensing as federal, state, and local laws evolve. For example, the City may consider updating the City's five-year lookback period[1] for background checks. This may help the City strike a balance between protecting consumer safety and not worsening existing inequalities within communities of color, as research suggests these populations are disproportionally penalized by these lookback periods. We acknowledge that many of these changes would require City Council action and are not within direct control of BACP or the Mayor's Office. However, we summarize the opportunity here.

In March 2021, the Chicago Department of Family and Support Services and BACP offered the following recommendations to advance this goal[2]:

- Create an avenue for individualized assessments so that an applicant can address criminal history findings or appeal negative decisions with evidence of mitigating factors that show stability, including completion of employment training programs and certificates of rehabilitation
- Limit the lookback period to three years from release, rather than five years from sentence
- Include age at release as a factor when reviewing applicants with justice involvement in their recent history
- Update policies so that those with felony drug charges are eligible for expungement
- Incorporate the new Illinois cannabis legalization laws
- Co-design a new policy with representatives of the communities most impacted

The City may also consider reviewing its requirements of public chauffeurs to determine if there are any unnecessary cost barriers. For example, the City could consider permanently removing the outstanding City debt assessment. Previously, chauffeur applicants in Chicago could be denied a public chauffeurs license (or a license renewal) in some circumstances due to outstanding City debt. In March of 2020, Mayor Lightfoot suspended debt collection in response to the COVID-19 pandemic, pausing debt collection for public chauffeurs in addition to some other Chicagoans with City debt.[3] The City could consider extending this suspension or permanently ending this program.[4]

As written above, the extensive variability among and across public chauffeurs in Chicago should be a key consideration as the City determines whether any policy or administrative changes are needed.

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[1] In 2021, during the course of this study, the City of Chicago passed the ChiBizStrong Initiative Ordinance, which included updating public chauffeur license qualification with a social equity and safety lens.
[2] Recommendations have been lightly edited
[3] "Mayor Lightfoot Announces Temporary Suspension of Debt Collection, Ticketing and Towing Practices to Provide Relief in Response to The Covid-19" March 18, 2020, Outbreak https://www.chicago.gov/city/en/depts/mayor/press_room/press_releases/2020/march/SuspensionTicketingDebtCollection.html.
[4] As of January 2023, the City now offers multiple debt relief programs. See the City's "New Start Chicago" summary of programs available at https://www.chicago.gov/city/en/sites/newstartchicago/home.html.

Note Regarding the COVID-19 Pandemic

This PPV Study was conducted primarily during calendar year 2021, coinciding with the global health pandemic and significant economic disruption surrounding COVID-19. As with most industries, the pandemic and various public health orders severely disrupted the PPV industry. This impacted all aspects of chauffeur conditions and services – including the level of chauffeur supply, demand for PPV services, costs of services, chauffeur earnings, chauffeur health and safety, and other contextual and economic factors. It has also affected passenger travel needs and preferences.

As discussed elsewhere in this report, the analysis focused on data from 2018 – 2020, both before and during the early months of the COVID-19 pandemic. We note that Illinois Governor J.B. Pritzker issued a Stay-at-Home Order (Executive Order 2020-10) effective March 21, 2020 and a Reopening Illinois Order (Executive Order 2020-38) effective May 29, 2020 to reopen non-essential businesses with certain restrictions. In addition, the City of Chicago and State of Illinois implemented various other public health guidelines and restrictions throughout much of 2020, coinciding with the third year of the PPV City Data Study Period, and throughout 2021 – 2022.

Given the shifting conditions and economic uncertainty at the time of this report's publication, we note that key results are likely to evolve in the short- and long-term. For example, while chauffeur earnings are quantified within this report based on 2018-2020 data, those earnings may look substantially different at present or in the coming years as PPV supply, demand, and other economic, social, and public health factors continue to shift. It may be useful to reconsider key analyses with updated data from 2021, 2022, or subsequent calendar years.

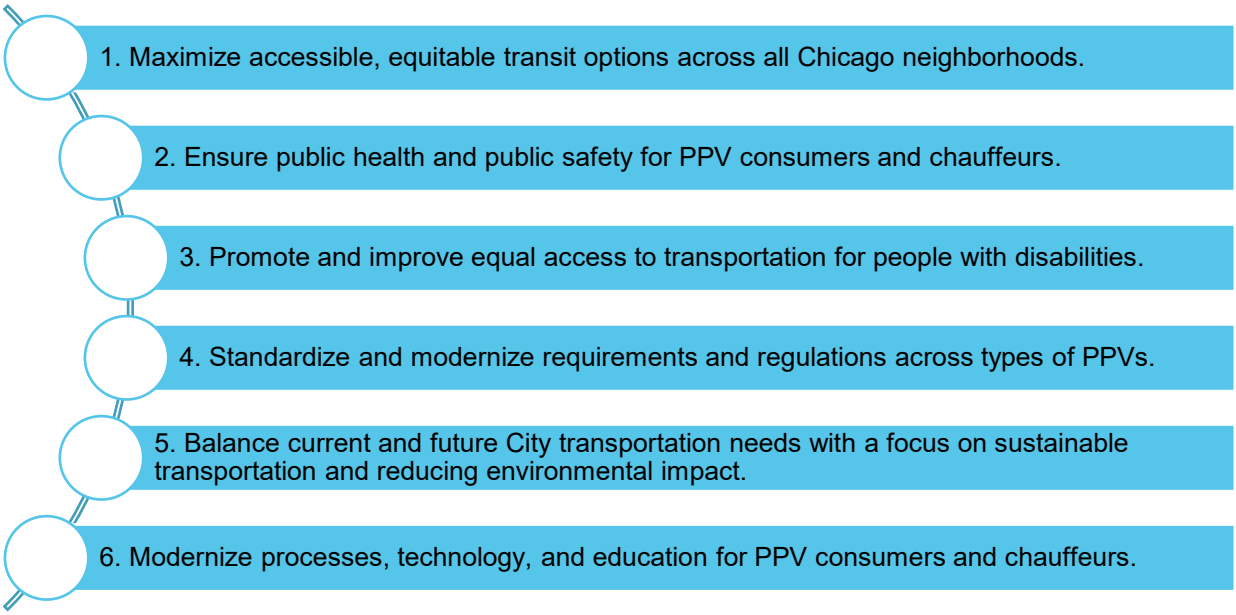
Note

Because these services did not constitute an audit, review, or examination in accordance with standards established by the American Institute of Certified Public Accountants, we are not expressing an opinion on the underlying data provided to support our analysis. Data provided for our analysis was provided by the City of Chicago and was obtained by the City from various sources. We performed analysis on the data provided as described in our report. We have no obligation to perform any services beyond those described in our report. If we were to perform additional services, other matters might come to our attention that may affect our analysis and related conclusions. We make no representations as to the adequacy of these services for the City's purposes.

Our services and work product are intended for the benefit and use of the City of Chicago. This engagement was not planned or conducted in contemplation of reliance by any other party and is not intended to benefit or influence any other party. Therefore, items of possible interest to a third party may not be specifically addressed or matters may exist that could be assessed differently by a third party.

PPV Program Goals

BACP has the following goals for its PPV program.



Section 8. Recommendations provides policy considerations and other strategic steps that align with and advance the City's PPV Program goals related to chauffeur conditions and license holders. Options to address other goals may be reflected in other reports within the PPV Study.

Crowe thanks the City of Chicago and all stakeholders who participated in this project by providing their data and insights.

2. Introduction

The City of Chicago (City) Department of Business Affairs and Consumer Protection (BACP) initiated the City's Public Passenger Vehicle (PPV) Study in 2020. The City conducted a competitive procurement and awarded a contract to Crowe LLP (Crowe) to prepare the study. The purpose of the PPV Study was to evaluate the state of the public passenger vehicle industry in the City of Chicago. The primary goal was to provide the City with data-driven analysis of conditions, based on available data. Based on analysis, this report also identified potential policy options and action steps for the City to consider in meeting transportation and economic goals.

This ***Chauffeur Conditions and Effects on License Holders*** report was the first report developed for the PPV Study.

This analysis was primarily limited to the City Data Study Period (see Figure 5) and data specifically related to TNP and taxicab chauffeur conditions, as those are the most prevalent types of PPV chauffeurs in Chicago. Livery chauffeur conditions were also discussed when data was available.

3. Definitions

Crowe recognizes that various entities may refer to certain PPV industry terms differently. This report utilizes the following definitions:

- **License holders** are companies or individuals that manage and operate the business and vehicles performing chauffeur driven transportation for hire for passengers. License holders include taxicab medallion license holders, TNP companies (Uber, Lyft, and Via), and livery companies.

- **Liveries,** including limousines and town cars, are licensed public passenger vehicles that charge a rate of fare which is not based on a meter. Livery rides and fares must be prearranged. Livery rides may not be street hailed or secured in cab stands. Liveries are most used by business travelers; but, also for special events, such as weddings and proms. The Chicago livery companies engage livery chauffeurs as employees or independent contractors.

- **Passengers**, for purposes of this report, refer to consumers of Chicago transportation options, including PPVs. Passengers include residents and non-residents of the City.

- **Public Chauffeurs** are individuals who operate a public passenger vehicle (PPV) in the City of Chicago. Public chauffeurs include those individuals who operate taxicabs, TNPs, livery, pedicab, and charter and sight-seeing buses. The scope of this assessment was limited to taxicab, TNP, and livery drivers.

- A **Public Chauffeur's License** is the license required by the City of Chicago and issued by BACP for a PPV chauffeur to operate with passengers in the City of Chicago**.** Chauffeurs also require a valid driver's license to operate and have minimum qualifications.

- **Public Passenger Vehicles (PPVs)** are for-hire vehicles including taxicabs, TNPs, liveries, pedicabs, charter and sight-seeing buses, private ambulances, water taxis, and tour boats. The scope of this assessment was limited to taxicabs, TNPs, and liveries.

- **Session Data**, as used in this report, refers to data submitted by PPV industry stakeholders to the City of Chicago as required. This dataset is the "record of each TNP driver session on the licensee's Internet-enabled application or digital platform. For purposes of this study, a driver's session begins when a licensee's driver activates a mode in the licensee's Internet-enabled application or digital platform, signaling the driver's readiness to receive and respond to trip requests. For purposes of this study, a driver's session ends when the driver deactivates the mode and is no longer able to receive and respond to TNP requests. All sessions completed during the reporting period must be reported in this file. Sessions in progress at the end of the reporting period should be held for the next report."

- **Taxicabs** are defined as a vehicle licensed for hire at fare rates set by the City and recorded by a taximeter. A taxi may be hailed by customers on the street or prearranged via phone call to the taxicab company or through a taxicab dispatch app, such as Curb or Arro. Historically, taxicab use has primarily been through real-time hailing by customers on the street. Taxis are driven by licensed public chauffeurs. A medallion is a metal plate affixed to the hood of the taxicab vehicle indicating the vehicle is a licensed City of Chicago taxicab.

- **Transportation Network Providers** (TNPs) provide and maintain a digital platform (smart phone application or app) to connect passengers with chauffeurs and vehicles for compensation. TNPs are commonly referred to as "rideshare" or "ride hail" companies and, in some jurisdictions, as Transportation Network Companies (TNCs). A Chicago TNP chauffeur and vehicle must be affiliated with a licensed TNP company and available only through affiliated TNP company's platform. A TNP chauffeur and vehicle may be affiliated with multiple TNP companies. TNP chauffeurs operate as independent contractors on affiliated TNP company platforms. This report relies on data from two TNPs from the City Data Study Period; this report anonymizes certain proprietary data by referring to these as "TNP Company 1" and "TNP Company 2."

- A **TNP Chauffeur's License** is a license issued pursuant to Chapter 9-115 of the Municipal Code of Chicago (MCC). Pursuant to Chapter 9-115 of the MCC, BACP issues a TNP chauffeur license to qualified individuals to operate TNP vehicles in the City of Chicago. TNP chauffeur qualifications are detailed in Chapter 9-115 MCC. A TNP chauffeur licensee may operate a TNP vehicle, but not a taxicab or livery. Chicago TNP chauffeurs and vehicles must be affiliated with a licensed TNP company and available only through affiliated TNP company's platform. A TNP chauffeur and vehicle may be affiliated with multiple TNP companies. TNP chauffeurs operate as independent contractors on affiliated TNP company platforms.

- **Trip Data**, as used in this report, refers to data submitted by PPV industry stakeholders to the City of Chicago as required. This dataset is the "record of each trip which shows where a passenger is picked up and dropped off. Must include all Trips completed during the reporting period. Trips in progress at the end of the reporting period should be held for the next report. For the purposes of this file, a trip is a transaction with a specific customer, including any additional people transported under the same transaction. A transaction with a different customer, even if present in the vehicle at the same time, is a separate trip."

4. PPV Program and Regulatory Background

4a. PPV Program Overview

The City of Chicago's Department of Business Affairs and Consumer Protection (BACP) ensures Chicago's public vehicles are safe, reliable and provide residents and visitors positive transportation options. Among other Department responsibilities, BACP licenses and regulates Chicago's public chauffeurs and public passenger vehicle license holders. These include but are not limited to taxicabs, liveries, and Transportation Network Providers (TNPs), also commonly referred to as ride-hail or ride-share.

A license is required for each public passenger vehicle (PPV) and chauffeur operating in the City of Chicago. Individuals who drive taxicabs, livery, and TNP vehicles are required to obtain a public chauffeur's license issued by BACP:

- Taxicabs must be driven by a BACP licensed taxi chauffeur.
- Livery vehicles must be driven by a BACP licensed livery chauffeur.
- TNP vehicles (which are driven by chauffeurs using Uber, Lyft, or Via technology platforms) must be driven by a BACP licensed TNP chauffeur. A TNP company secures TNP chauffeur licenses for its affiliated drivers.[5]

In addition, BACP licenses and regulates other public passenger vehicle industries: charter-sightseeing buses, pedicabs, medicars, private ambulances, tour boats, and water taxis – any passenger vehicle which is chauffeur or captain operated. This study did not include analysis of these other PPVs.

The Municipal Code of Chicago (MCC) provides regulations and requirements for PPVs operating in Chicago. The MCC is available at www.amlegal.com. Relevant chapters include the following:

- Chapter 9-104: Public Chauffeurs
- Chapter 9-112: Taxicabs
- Chapter 9-114: Public Passenger Vehicles Other than Taxicabs *(addresses livery)*
- Chapter 9-115: Transportation Network Providers

BACP provides an overview of various PPV requirements in its "Chicago's Guide to Licensing Public Passenger Vehicles" publication.

[5] A taxi chauffeur licensee is permitted to operate a taxi, livery, or TNP vehicle. A livery chauffeur licensee may operate a livery or TNP vehicle. A TNP chauffeur licensee may only operate a TNP vehicle.

4b. Licensing Costs

Public passenger vehicles are subject to specific licensing and other fee structures. The following section summarizes the applicable taxes and fee structures for taxicabs, TNPs[6], and livery chauffeurs and affiliated companies or medallion/license owners.[7]

Figure 1: Taxicab Licensing Costs and Fees

Licensing Cost	Payer	Fee / Term
Medallion License	Medallion Owner	$500.00/2 years
Ground Transportation Tax (GTT)	Medallion Owner	$98.00/month
Accessibility Fund	Medallion Owner	$22.00/month
Chauffeur License	Traditional Lease Chauffeur	$5.00/2 years

Figure 2: TNP Licensing Costs and Fees

Licensing Cost	Payer	Fee / Term
TNP License & Administrative Fee	TNP Company	$10,000.00/year + $0.02/trip
Ground Transportation Tax (GTT)	TNP Company	$0.53 to $7.88 per trip
Accessibility Fund	TNP Company	$0.10 per trip

Figure 3: Livery Licensing Costs and Fees

Licensing Cost	Payer	Fee / Term
Livery License	Livery License Owner	$500.00/1 year
Ground Transportation Tax (GTT)	Livery License Owner	$3.50/day
Chauffeur License	Licensee	$5.00/2 years

As shown above, City fees and taxes are not uniform across the types of PPVs. Notably, the taxicab and livery fees and taxes are largely structured to apply to each vehicle / medallion owner or chauffeur, whereas the TNP fees and taxes are assessed per trip and determined at the company (TNP platform) level.

[6] See MCC § 3-46-030 for additional information on the GTT rate per TNP. This fee is assessed based on multiple factors: use of wheelchair accessible vehicle; shared versus single ride; location (downtown congestion zone, special zone, or neighborhood service); and time and day of week

[7] "Chicago's Guide to Licensing Public Passenger Vehicles." City of Chicago. www.chicago.gov/content/dam/city/depts/bacp/publicvehicleinfo/medallionowners/publicvehiclelicensingguide20200127.pdf.

4c. Vehicle Specifications[8]

BACP requires that vehicles used for PPV services meet specific criteria. Taxis, liveries, and TNP vehicles must comply with the specifications indicated by Xs in Figure 4:

Figure 4: Vehicle Specifications by PPV

	Taxicabs	Livery Vehicles	TNP Vehicles
Must meet federal motor vehicle safety standards	X	X	X
Must secure one public vehicle advertising permit per vehicle ($100 annually) prior to displaying exterior or interior advertising	X	X	X
Must complete at least one annual City-approved inspections	X	X	X
Cannot have more than 150,000 miles at time of initial licensing	X	-	-
Titles showing "salvage," "rebuilt," "junk," "total loss," or equivalent classifications are not eligible to operate as a PPV	X	X	X
Maximum capacity of 9 persons, including the driver*	X	X	X

*Vehicles with a capacity of more than 9 may obtain a charter/sightseeing license

4d. Insurance Requirements[9]

In addition to license fees and taxes and vehicle requirements, all PPVs are required to meet certain insurance requirements. These requirements vary by the type of PPV chauffeur service provided.

Taxicabs are required to carry at least $350,000 combined single limit coverage per occurrence per taxicab. Every insurance policy or contract for insurance must name the City of Chicago as an additional insured. Taxicab medallion owners are required to maintain the required coverage.

Liveries are also required to carry at least $350,000 combined single limit coverage per occurrence. The names and address of the insured must match the name and address of the vehicle registration and policy number. Every insurance policy or contract for insurance must name the City of Chicago as an additional insured. Livery license owners are required to maintain the required coverage.

TNP companies are required by the City to provide at least the following minimum insurance coverage: (1) commercial general liability insurance with limits of not less than $1,000,000.00 per occurrence, for bodily injury, personal injury, and property damage; (2) (i) commercial automobile liability insurance with a combined single limit for bodily injury and property damage of $1,000,000.00 per occurrence, covering liability resulting from any occurrence arising out of or caused by the operation of a transportation network vehicle (including owned, hired, and non-owned vehicles) while the TNP chauffeur has accepted a ride until the completion of the ride. Every insurance policy or contract for insurance must name the City of Chicago as an additional insured.

[8] "Chicago's Guide to Licensing Public Passenger Vehicles." City of Chicago. www.chicago.gov/content/dam/city/depts/bacp/publicvehicleinfo/medallionowners/publicvehiclelicensingguide20200127.pdf.
[9]"Chicago's Guide to Licensing Public Passenger Vehicles." City of Chicago. www.chicago.gov/content/dam/city/depts/bacp/publicvehicleinfo/medallionowners/publicvehiclelicensingguide20200127.pdf.

5. PPV Study Inputs

The PPV Study uses data and other inputs from several sources. This section provides an overview of each input to the PPV Study. Please see Section 6a. Methodology and Assumptions for more details on how inputs were used for analyses.

5a. Stakeholder Engagement

During the initial phases of the PPV Study, BACP sought community and stakeholder feedback on proposed research questions and industry challenges. External stakeholders were also given opportunities to provide feedback on the City's draft Public Chauffeur Survey, and their feedback informed substantial revisions to the survey prior to its publication. The Public Chauffeur Survey received over 7,000 responses and is a source of information about chauffeur perceptions, concerns, and motivations for context around this study.

Between October and December 2020, the City and Crowe provided opportunities for the following stakeholder groups to share their perspectives in advance of the PPV Study and/or to provide an opportunity for feedback on the draft Public Chauffeur Survey:

- **TNP Chauffeurs**: Chicago Rideshare Advocates and The People's Lobby: Chicago Gig Alliance
- **Taxi Chauffeurs**: American Federation of State, County & Municipal Employees (AFSCME)[10]
- **TNP Companies**: Uber, Lyft, and Via
- **Taxicab Medallion License Holders and Affiliations**
- **Livery License Holders and Chauffeurs**: Illinois Limousine & Bus Association (ILLBA)

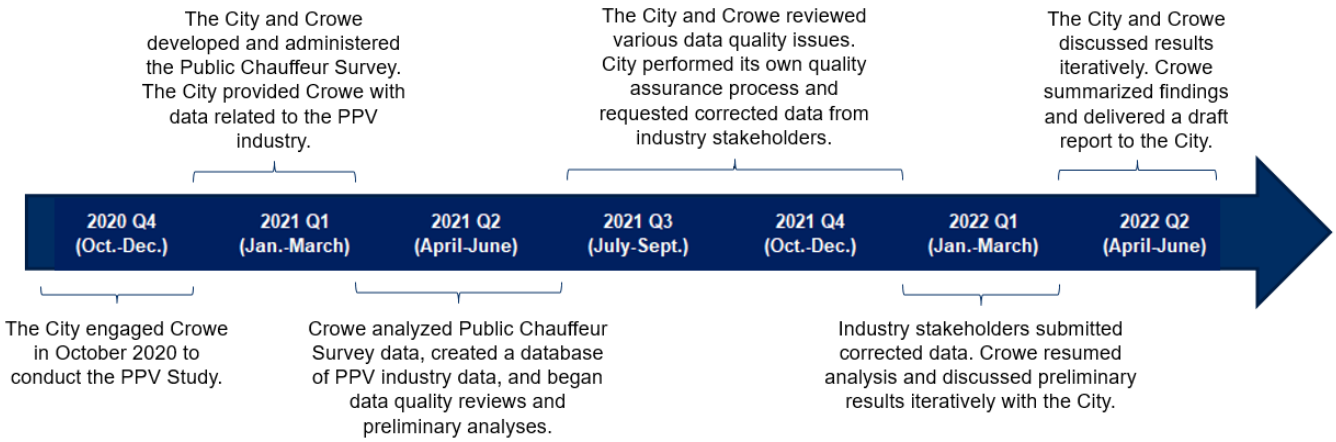
BACP also facilitated a stakeholder session in September 2021 to review key aspects of the planned earnings methodology and provide an update on the PPV Study. Stakeholders from taxicab and TNP driver advocacy organizations, taxi industry representatives, and TNP companies attended, as well as representatives from the City of Chicago Mayor's Office, BACP, and Crowe. During that stakeholder session and in follow-up communications to BACP, some stakeholders provided feedback and suggestions. The study considered this feedback when finalizing the study approach.

In addition to the outreach specific to this PPV Study, BACP regularly engages with stakeholders across the TNP, taxicab, and livery industries to understand their needs.

[10] As of the time of this Report, the United Taxidrivers Community Council (UTCC) had not participated in the City and Crowe's scheduled taxicab driver stakeholder meeting.

5b. Data Collection

BACP collected and provided all economic and industry data for licenses, passenger rates, resident transportation priorities and other information related to the PPV program for the PPV Study. Crowe relied on several data gathering tools and techniques to develop a holistic picture of the PPV industry and chauffeur conditions in Chicago. The image below provides a timeline of key study activities.



City of Chicago Data

The City of Chicago regularly collects data related to the PPV industry and posts non-personally identifiable information (non-PII) aggregated data for public viewing on the City's open data portal (data.cityofchicago.org/). As part of its oversight responsibilities and licensing processes, BACP's legal authority includes requiring taxicab medallion and TNP company licensees to report their respective trip activity data to the City. The City data portal also includes licensing information for taxicabs, liveries, and public chauffeurs within public passenger vehicles and public chauffeur datasets.

Reporting requirements for TNPs are outlined in the City's TNP Reporting Manual, as set forth in Chapter 9-115 of the Municipal Code of Chicago and Section II of the Transportation Network Providers Rules issued by BACP. The City requires TNPs to submit five datasets monthly: (1) Trips, (2) Drivers, (3) Sessions, (4) Vehicles, and (5) Compensation (effective August 1, 2020). TNPs may also receive separate and additional requests for data related to trip requests, locations, or communications. Similarly, BACP is authorized to collect select information on taxi chauffeurs, vehicles, and rides.

The City of Chicago data portal publishes some of this reported information, including public passenger vehicle and chauffeur datasets, taxicab trip datasets, and TNP vehicle, chauffeur, and trip datasets. The City applies deidentification and aggregation techniques to protect privacy prior to publicly publishing trip and chauffeur data.

The City also provided Crowe with aggregate data via internal City dashboards leveraging a data visualization platform. These dashboards provide internal City views of the same datasets publicly available on the City data portal. This report includes visualizations from the City's internal dashboards, such as numbers of active TNP and taxicab chauffeurs over time.

Supplemental TNP Data Request

In March 2021, BACP issued a subpoena for additional data and information to the licensed TNP companies for 12 non-consecutive one-week periods over 2018 – 2020 for this study. Rule TNP2.03(c) issued by BACP provides that the City may request additional or supplemental data sets from TNPs.

The following 12 non-consecutive weeks were chosen to provide a representative data sample from every quarter of each year within the study period. This report will refer to this as the **City Data Study Period**.

Figure 5: PPV City Data Study Period

Week	Week Beginning	Week Ending
1	12/31/2017	1/6/2018
2	4/1/2018	4/7/2018
3	7/1/2018	7/7/2018
4	10/1/2018	10/7/2018
5	12/31/2018	1/6/2019
6	4/1/2019	4/7/2019
7	7/1/2019	7/7/2019
8	10/1/2019	10/7/2019
9	12/31/2019	1/6/2020
10	4/1/2020	4/7/2020
11	7/1/2020	7/7/2020
12	10/1/2020	10/7/2020

For the 12 one-week periods, BACP requested that TNPs provide the data elements outlined in the TNP Reporting Manual. In addition, BACP's March subpoena requested that the TNPs provide a written description of how TNP chauffeur earnings are calculated, including TNP chauffeur earnings structure, variables, and formulas. The City followed up with TNP companies between March 2021 and March 2022 to clarify questions related to original data provided as part of the March subpoena. At the City's request, TNP companies submitted corrected data for the PPV Study in December 2021 and January 2022.

BACP provided the 12-week datasets to Crowe securely for confidential use in the PPV Study. Crowe performed data quality assurance reviews and created a database with the data provided.

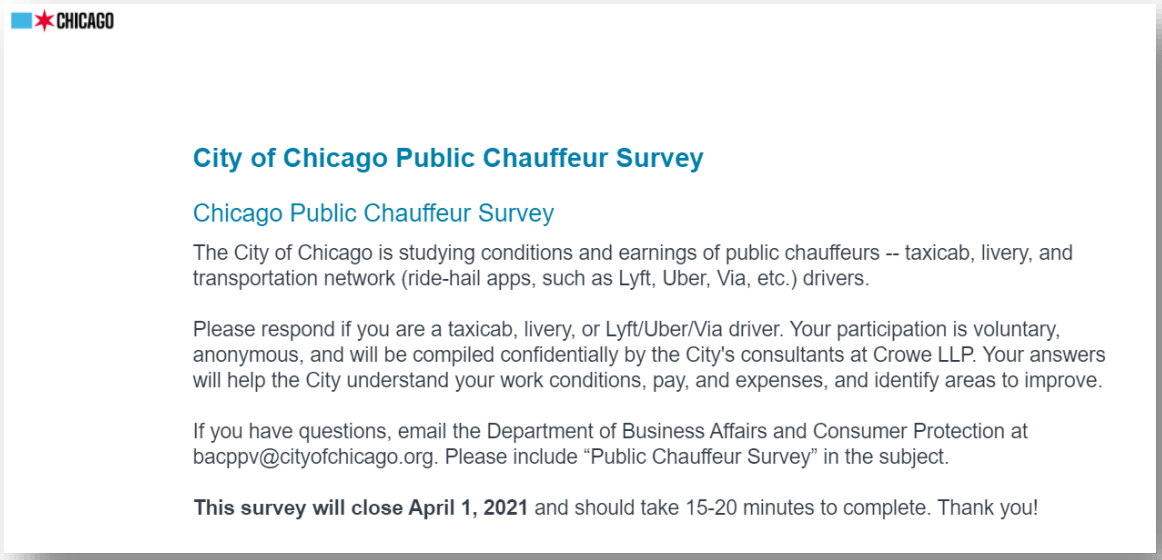
Public Chauffeur Survey

As part of the PPV Study, the City and Crowe developed and administered an anonymous online survey that was distributed to Chicago licensed taxi, livery, and TNP chauffeurs licensed/active as of March 2021. The goal of the Public Chauffeur Survey was to gather first-hand accounts, data, and input from PPV chauffeurs on existing conditions.

The City provided stakeholder representatives, including TNP and taxi chauffeurs, an opportunity to deliver feedback on the first draft of the Public Chauffeur Survey, and the City and Crowe incorporated stakeholder feedback before finalizing the survey structure and specific questions. The final Public Chauffeur Survey contained 50 questions and covered topics including chauffeur demographic information, estimated take-home earnings and expenses, preferred times to operate as a chauffeur, PPV industry concerns, and other comments. The Public Chauffeur Survey was open for responses for over three weeks (March 10 – April 1, 2021).

BACP posted the survey link publicly on March 9 and conducted a robust direct-email campaign. In addition to outreach efforts across all BACP social media platforms, BACP contacted chauffeur advocacy groups, taxicab companies, TNP companies, all 50 aldermanic ward offices, and Neighborhood Business Development Centers to promote the survey.

Over 7,000 survey responses were submitted before the April 1 deadline. The PPV Study used survey results to answer certain questions of interest to the City where PPV industry data were not available. Please see Section 7. Results: Other Chauffeur & License Holder Conditions and ***Public Chauffeur Survey Results Summary*** (provided under separate cover to the City) for key survey results.


CHICAGO

City of Chicago Public Chauffeur Survey

Chicago Public Chauffeur Survey

The City of Chicago is studying conditions and earnings of public chauffeurs -- taxicab, livery, and transportation network (ride-hail apps, such as Lyft, Uber, Via, etc.) drivers.

Please respond if you are a taxicab, livery, or Lyft/Uber/Via driver. Your participation is voluntary, anonymous, and will be compiled confidentially by the City's consultants at Crowe LLP. Your answers will help the City understand your work conditions, pay, and expenses, and identify areas to improve.

If you have questions, email the Department of Business Affairs and Consumer Protection at bacppv@cityofchicago.org. Please include “Public Chauffeur Survey” in the subject.

This survey will close April 1, 2021 and should take 15-20 minutes to complete. Thank you!

Data Quality Assurance and Security

To validate the integrity of data, the City and Crowe performed a series of data validation activities with all datasets utilized in the PPV Study. Before providing TNP and taxi datasets to Crowe, the City performed its own data quality assurance testing, per City policy for all datasets published on the open data portal. In addition, the City and Crowe validated the expected number of records for any datasets transmitted securely between the parties. Crowe additionally reviewed data for inconsistencies, outliers, and other anomalies. Analysts performed a series of data quality tests to verify that data was appropriately linked, and to confirm that data reflects appropriate field data type, field length, and other parameters to identify null or incorrect values. All data was transmitted securely via a secure file transfer protocol (SFTP) site and is held confidentially and securely per the City’s contract with Crowe.

6. Results: Earnings of Full-Time Chauffeurs

6a. Methodology and Assumptions

The City prioritized for Crowe the goal to understand full-time chauffeur conditions in this study. The City's represented perspective was based on full-time chauffeurs being most likely to rely on providing PPV services as their primary source of income. There is significant diversity in part-time chauffeur profiles and variables. Given the importance of full-time chauffeurs from a policy and earnings standpoint, this report prioritized analysis of full-time chauffeur conditions.

This PPV Study used available City data to calculate net earnings of full-time chauffeurs. For purposes of this study, full-time chauffeurs are those with greater than or equal to 30 hours per week of time driving passengers; this definition is discussed further below.

The City of Chicago regularly collects data related to the PPV industry and posts non-personally identifiable information (non-PII) aggregated data for public viewing on the City's open data portal (data.cityofchicago.org/). As part of its oversight responsibilities and licensing processes, BACP's legal authority includes requiring taxicab medallion and TNP company licensees to report their respective trip activity data to the City. The City data portal also includes licensing information for taxis, liveries, and public chauffeurs within public passenger vehicles and public chauffeur datasets. See Section 5b. Data Collection for additional detail.

Analysis of TNP and taxi chauffeur earnings relied on data from 12 non-consecutive one-week periods over 2018 – 2020, referred to herein as the City Data Study Period (please see Figure 5). Comparable livery data is not reported to the City.

The City reviews and performs quality assurance on data reported by the PPV industry. Additionally, Crowe completed data quality assurance steps prior to analysis for this report.

Crowe identified certain limitations and data quality issues within certain aspects of the available industry data. One such limitation was that taxicab and TNP data use different identifiers for chauffeurs; the taxicab datasets use Public Chauffeur Number, whereas the TNP datasets use Driver's License Numbers (DLN). The City provided a crosswalk to link known DLNs to Public Chauffeur Number, however there were instances in which certain chauffeur records were missing a key identifier. The impact of this limitation is a subset of records omitted from the "multi-apping" analysis contained in this report.

Another limitation is lack of data related to the length of time a taxicab chauffeur operates their vehicle in any given day or shift. For TNPs, the City has access to *session* length data that reports how long a TNP chauffeur is operating, regardless of whether that chauffeur is carrying passengers. This enables an understanding of TNP utilization, or the portion of time that a TNP chauffeur spends in active *trips* versus portion of time the chauffeur is available on the TNP app (logged into a *session*) (please see Figure 8). Without comparable data for taxicabs, this study is not able to analyze taxicab utilization. In addition, the lack of taxicab *session* data (or similar), caused the research team to rely on *trip* durations for certain key analyses, including determination of which chauffeurs are considered full-time, as discussed later.

In addition, Crowe performed routine cleansing activities to standardize data formats and conservatively remove outliers, erring on the side of including data. For example, the format of DLNs was not uniform across the datasets. We suppressed leading zeros from DLNs where applicable. In cases where datasets included expired or suspended public chauffeur's licenses and/or driver's license numbers, these records were retained within the analysis. Where certain TNP and taxi trip records contained blank, zero, or negative *Trip Pay* and/or *Fare* amounts, these were removed from the dataset.

Within the taxi dataset specifically, Crowe also addressed known data outliers in the *Trip_Seconds* and *Fare* fields. In the taxi *Trip_Seconds* field, Crowe filtered out outliers, defined as Trips >10 hours. This resulted in excluding 1,279 records, or 0.04% of all trip time. In the taxi *Fare* field, Crowe filtered out outliers, defined as trips with hourly earnings >$400 per hour. This resulted in excluding 35,446 records, or 1.3% of all trips.

6b. Full-Time Chauffeur Definition

This study acknowledges that PPV chauffeurs have varying statuses as independent contractors or employees, and chauffeurs operate for varying hours and motivating factors. For administrative and policy purposes, it is useful to analyze the earnings of the subset of chauffeurs who operate on an approximately full-time basis. As such, the City and Crowe primarily focused this PPV Study on net earnings analysis for full-time TNP and taxi chauffeurs. The Internal Revenue Service (IRS) defines a full-time employee as, for a calendar month, an employee employed on average at least 30 hours of service per week or 130 hours of service per month.[11] **For purposes of this report, greater than or equal to 30 hours of time driving with passengers during any one or more weeks during the 12-week City Data Study Period was the threshold for considering a chauffeur to be "full-time."**

A chauffeur could be classified as full-time for zero, one, or up to all 12 of the individual City Data Study Period weeks. *For those specific weeks where a unique chauffeur was classified as full-time based on their trip data*, Crowe included that chauffeur's trip, session, and compensation data within all full-time analyses for that specific City Data Study Period week. For example, if a chauffeur was classified as full-time for the first three City Data Study Period weeks and was classified as part-time for the remaining nine weeks of the City Data Study Period weeks, that chauffeur's data for the first three weeks was included in all full-time analyses; for the remaining nine study weeks, that chauffeur's data was included in part-time analyses only.

[11] Internal Revenue Service (January 22, 2021). "Identifying Full-time Employees." https://www.irs.gov/affordable-care-act/employers/identifying-full-time-employees.

6c. Full-Time TNP Chauffeurs

In total, there were approximately *148,351 unique TNP chauffeurs* across all City datasets utilized for this PPV Study (as identified through count of unique Driver's License Number). Depending on the City Data Study Period week, between 0.25% and 6.05% of TNP chauffeurs within that week were categorized as full-time. Most TNP chauffeurs in the City Data Study Period weeks operated in a part-time capacity. See Figure 6.

Figure 6: City Data Study Period Breakdown of Full-Time TNP Chauffeurs Using Trip Time

Study Week	Week Beginning	Number of Full-Time TNP Chauffeurs (≥30 hours per week of Trip time)	Total TNP Chauffeurs in Study Week	Percentage of Full-Time TNP Chauffeurs (≥30 hours per week of Trip time)
1	12/31/2017	221	20,371	1.08%
2	4/1/2018	2,526	48,630	5.19%
3	7/1/2018	1,552	51,975	2.99%
4	10/1/2018	3,261	53,914	6.05%
5	12/31/2018	530	54,383	0.97%
6	4/1/2019	2,220	54,288	4.09%
7	7/1/2019	1,230	54,510	2.26%
8	10/1/2019	2,151	55,735	3.86%
9	12/31/2019	520	56,269	0.92%
10	4/1/2020	32	12,710	0.25%
11	7/1/2020	745	19,169	3.89%
12	10/1/2020	768	23,416	3.28%

Some stakeholders may argue that session time, rather than trip time, should be the factor by which to determine total "working time," as session time includes all time logged into the TNP mobile application, including time waiting between rides and driving to pick up a passenger. However, critics of that approach highlight that TNP chauffeurs may be logged into and actively working on multiple gig applications at one time, including multiple TNP applications and food delivery applications. A TNP chauffeur may also be logged into the application and trigger the start of a session but choose not to accept a ride(s). Considering these viewpoints, the research team decided to use trip time to determine full-time status for TNP chauffeurs for multiple reasons. Further, for purposes of this study, trip time is available for both TNP and taxicab chauffeurs in the City of Chicago, whereas we do not have data for taxicabs that is comparable to TNP session data. Thus, the research team needed a consistent methodology to determine the full-time population for taxicab and TNP chauffeurs.

Crowe included certain session time calculations to serve as comparisons for some TNP data throughout this report. For example, **TNP chauffeurs with ≥ 30 hours of *session* time comprised 13.82%-23.20% of all chauffeurs within the respective City Data Study Period week populations.** See Figure 7. Comparing this figure to the prior figure, note that a higher portion of TNP chauffeurs have ≥30 hours of session time than the portion of TNP chauffeurs with ≥30 hours of trip time.

Figure 7: City Data Study Period Breakdown of Chauffeurs with ≥30 hours of Session Time

Study Week	Week Beginning	Number of TNP Chauffeurs with ≥30 hours of session time	Total TNP Chauffeurs in Study Week	Percentage of TNP Chauffeurs with ≥30 hours of session time
1	12/31/2017	2,815	20,371	13.82%
2	4/1/2018	9,122	48,630	18.76%
3	7/1/2018	8,742	51,975	16.82%
4	10/1/2018	11,866	53,914	22.01%
5	12/31/2018	10,602	54,383	19.50%
6	4/1/2019	12,018	54,288	22.14%
7	7/1/2019	10,470	54,510	19.21%
8	10/1/2019	12,930	55,735	23.20%
9	12/31/2019	10,573	56,269	18.79%
10	4/1/2020	2,666	12,710	20.98%
11	7/1/2020	3,726	19,169	19.44%
12	10/1/2020	4,720	23,416	20.16%

TNP Utilization – Relationship Between Trip Time and Session Time

Crowe also calculated utilization rate using session and trip data for full-time TNP chauffeurs during the City Data Study Period. Here, utilization refers to the percentage of total time logged into the TNP mobile platform that is spent driving passengers; this was determined by calculating the difference between trip time, or a TNP chauffeur's time spent driving passengers, and session time, or total time a chauffeur is logged into the TNP mobile platform. There may be zero, one, or many trip records within one session record; this analysis sums all trip durations in the numerator of the formula below.

The following formula was used to determine the utilization rate:

> **TNP Utilization Rate** = Total *Trip* Time (i.e., total time driving passengers) / Total *Session* Time (total time logged into the TNP application)

The utilization rate for all full-time and part-time TNP chauffeurs during the City Data Study Period weeks ranged between **32% and 64%.** Crowe notes that the week with the lowest utilization rate (32%), the week beginning 4/1/2020, immediately followed Illinois Governor JB Pritzker's COVID-19 related Stay-At-Home Order (Executive Order 2020-10), effective March 21, 2020. The weeks beginning 4/1/2020, 7/1/2020, and 10/1/2020 occurred during the COVID-19 pandemic.

Figure 8: TNP Chauffeur Utilization Rates by City Data Study Period Week[12]

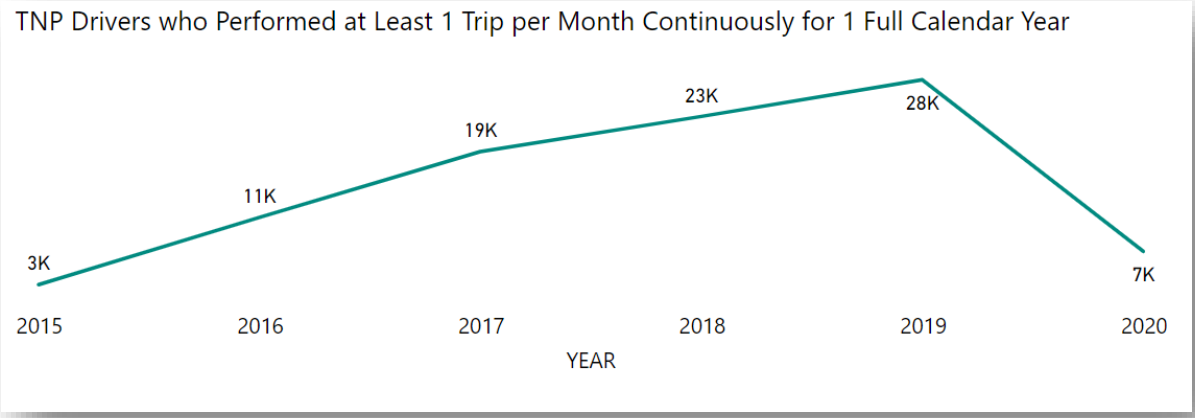
Study Week Beginning	Utilization Rate
12/31/2017	41%
4/1/2018	64%
7/1/2018	58%
10/1/2018	61%
12/31/2018	46%
4/1/2019	56%
7/1/2019	51%
10/1/2019	54%
12/31/2019	46%
4/1/2020	32%
7/1/2020	58%
10/1/2020	54%

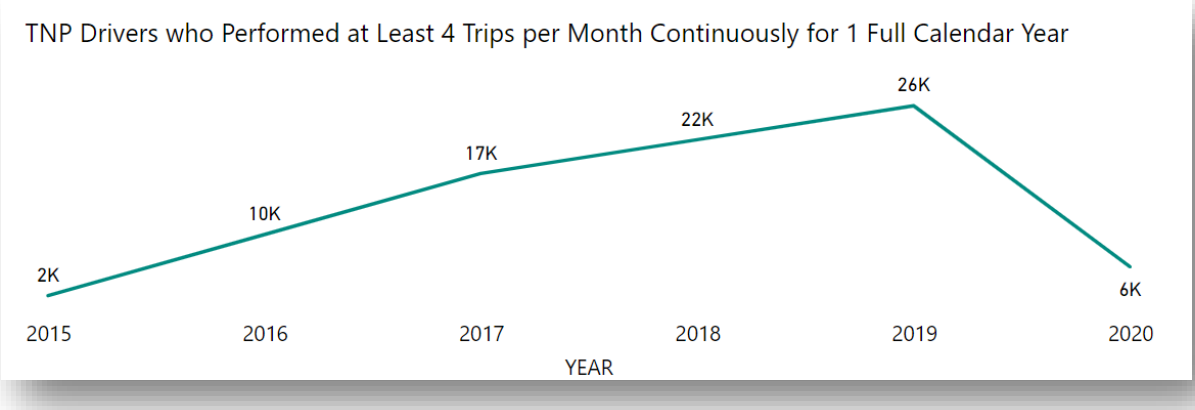
[12] Refer to Section 6e later in this Report for details around multi-apping and how it affects utilization.

TNP Chauffeur Tenure / Longevity

The City also tracks data related to TNP chauffeur longevity. The images below are from the City's internal data visualization dashboards. The top graph in Figure 9 demonstrates that from 2018-2020, there were between 7,000 and 28,000 TNP chauffeurs that performed at least one trip per month for one full calendar year. During that same period, there were between 6,000 and 26,000 TNP chauffeurs that performed at least four trips per month for one full calendar year. See Figure 9 below. Note that there is little difference in the numbers of TNP chauffeurs performing at least one versus at least four trips per month on a continuous basis. During the peak in 2019, the numbers equate to approximately 43% of TNP chauffeurs performing at least one trip consistently per month and approximately 40% performing at least four trips consistently per month.

Figure 9: TNP Driver Longevity





6d. Full-Time Taxi Chauffeurs

Full-time taxi chauffeurs comprised 0.5%-6.1% of all taxi chauffeurs within the respective City Data Study Period week populations. Full-time was defined as ≥30 hours per week of trip time. See Figure 10.

Figure 10: City Data Study Period Breakdown of Full-Time Taxi Chauffeurs Using Trip Time

Study Week	Week Beginning	# Full-Time Taxi Chauffeurs (≥30 hours per week of Trip time)	Total Taxi Chauffeurs in Study Week	% Full-Time Taxi Chauffeurs (≥30 hours per week of Trip time)
1	12/31/2017	20	3,922	0.5%
2	4/1/2018	74	4,472	1.7%
3	7/1/2018	29	4,516	0.6%
4	10/1/2018	254	4,681	5.4%
5	12/31/2018	21	4,194	0.5%
6	4/1/2019	151	4,847	3.1%
7	7/1/2019	33	4,646	0.7%
8	10/1/2019	143	4,770	3.0%
9	12/31/2019	22	3,962	0.6%
10	4/1/2020	4	578	0.7%
11	7/1/2020	34	560	6.1%
12	10/1/2020	42	819	5.1%

As discussed previously, the City does not currently receive data related to the duration of taxi chauffeur "shifts" or length of time operating a taxicab in any given day (data comparable to TNP sessions). Thus, we are not able to analyze the number of taxi chauffeurs that operate for ≥30 hours a week (including both trip time and time waiting for passengers) nor are we able to calculate a utilization rate for taxi chauffeurs.

6e. Multi-Apping and Multiple PPV Services

Crowe analyzed the number of chauffeurs within City datasets whose Driver's License Number (DLN) appears in any combination of the TNP Company 1, TNP Company 2, or taxi datasets, highlighting that the chauffeur either (1) operated as a chauffeur for multiple TNP companies, or (2) operated as a chauffeur for one or more TNP companies and as a taxi chauffeur during the City Data Study Period. **Crowe identified 41,830 chauffeurs, or 28.2% of all chauffeurs who fit this multi-apping criteria.** See Figure 11.

Figure 11: Chauffeurs Providing Multiple PPV Services

PPV Services Provided by the Chauffeur	Number of Distinct Chauffeurs	Percentage of Total Chauffeur Population (148,351 distinct DLNs)
TNP Company 1 and TNP Company 2	36,937	24.9%
TNP Company 2 and Taxi	2,092	1.4%
TNP Company 1 and Taxi	1,613	1.1%
TNP Company 1, TNP Company 2, and Taxi	1,188	0.8%
Total	41,830	28.2%

Crowe analyzed session data for TNP chauffeurs who used both TNP platforms to determine the extent to which chauffeurs may have been logged into two TNP company applications simultaneously, sometimes called "multi-apping." Crowe analyzed this overlapping TNP session data by chauffeur to understand the estimated impact, if any, of overlapping TNP sessions on other analyses in this report. Crowe analyzed four scenarios for overlapping TNP session time, as illustrated in Figures 12-15.

Figure 12: Scenario 1: TNP Company 2 Session Contained within TNP Company 1 Session

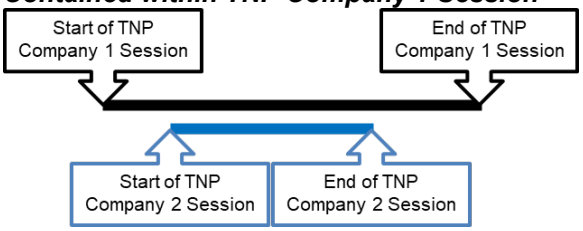


Figure 13: Scenario 2: TNP Company 1 Session Contained within TNP Company 2 Session

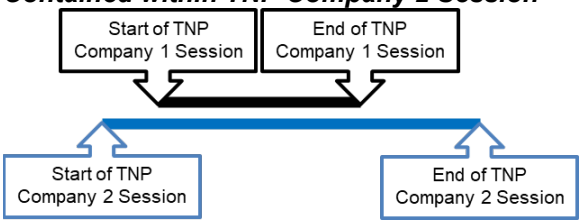


Figure 14: Scenario 3: TNP Company 1 Session Started after TNP Company 2 Session Started and Ended after TNP Company 2 Session Ended

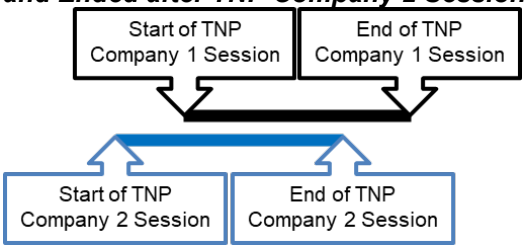
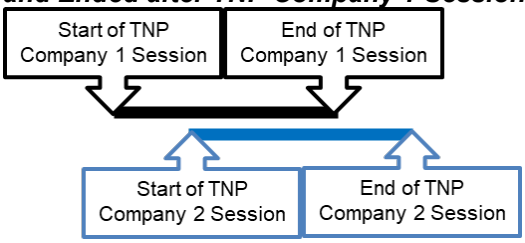


Figure 15: Scenario 4: TNP Company 2 Session Started after TNP Company 1 Session Started and Ended after TNP Company 1 Session Ended



Crowe used *Session_start_date_and_time* and *Session_end_date_and_time* fields to determine the number of overlapping session records (by Driver's License Number) between TNP Company 1 and TNP Company 2 datasets, and to analyze the *hours* of overlap within those overlapping sessions. See Figure 16 below.

These results indicate that **98.8% of session hours by DLN within one TNP dataset did not overlap with session hours in the alternate TNP dataset. The remaining 1.2% of session hours did overlap for more than zero minutes with another session.** (Calculation note: 1.2% = the total number of overlapping session hours (107,675; see Figure 16) by total session hours (9,119,099; see Figure 17).

Figure 16: Number of Overlapping Session Hours for All TNP Chauffeurs

Overlapping TNP Session Scenario	Hours
Scenario 1: TNP Company 2 session contained within TNP Company 1 session	21,271
Scenario 2: TNP Company 1 session contained within TNP Company 2 session	37,635
Scenario 3: TNP Company 1 session started after TNP Company 2 session started, and ended after TNP Company 2 session ended	29,586
Scenario 4: TNP Company 2 Session Started after TNP Company 1 Session Started and Ended after TNP Company 1 Session Ended	19,183
Total number of overlapping session hours	107,675

Figure 17: Total TNP Session Hours for All TNP Chauffeurs

Total TNP Session Hours	Hours
Total TNP Company 2 session hours	5,111,358
Total TNP Company 1 session hours	4,007,741
Total TNP session hours	9,119,099

This same analysis was completed for the subset of full-time TNP chauffeurs only. **Overlapping session time for full-time TNP chauffeurs accounted for 2.4% of all full-time chauffeur session time within the City Data Study Period.**

Because such a small portion of sessions in the City Data Study Period overlapped with other sessions, the City and Crowe made the decision to retain all session time within the analysis, without removing overlapping records, as the impact on other analysis would not be significant.

As discussed previously, the City does not currently receive data related to the duration of taxi chauffeur "shifts" or length of time operating a taxicab in any given day (data comparable to TNP sessions). Thus, we are not able to analyze potential overlap between operating a taxicab and other services, such as TNP apps or other gig economy applications.

Additional research will be required to determine the extent to which chauffeurs may be utilizing multiple other gig economy applications at one time (e.g., grocery and restaurant delivery) and/or driving as a taxi chauffeur while also logged into the TNP mobile application.

6f. Trip and Session Time Calculations

Crowe calculated weekly average operating time using trip data for taxi and TNP chauffeurs, and session data for TNP chauffeurs only, using data from the City Data Study Period.

TNP Chauffeurs

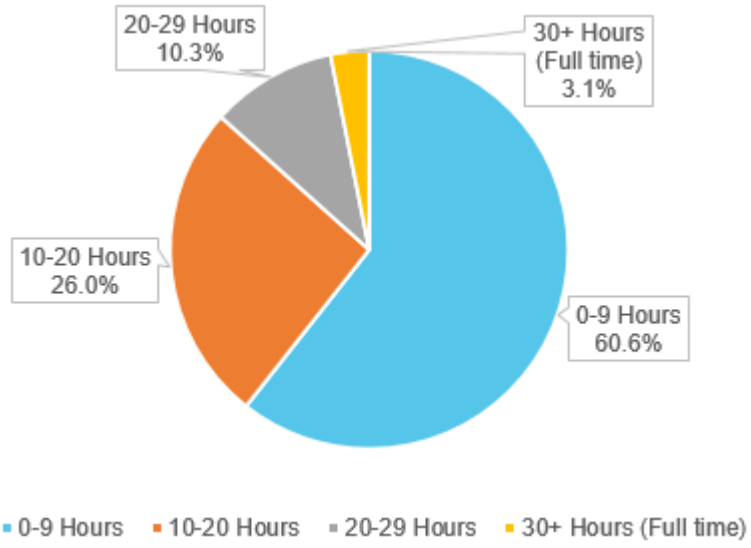
Crowe calculated hours for TNP chauffeurs in two ways:

1. **Average trip Time** = Average of Total *trip* Time (e.g., total time driving passengers) per City Data Study Week summarized by Driver's License Number (DLN)
2. **Average session Time** = Average of Total *session* Time (i.e., total time logged into the TNP application) per City Data Study Week summarized by Driver's License Number (DLN)

Results demonstrate that most TNP chauffeurs in the City Data Study Period weeks operated fewer than 30 hours per week using both trip and session time calculations. 60.6% of TNP chauffeurs recorded 0-9 hours of trip time per week on average, 26.0% of TNP chauffeurs recorded 10-19 hours of trip time per week on average, 10.3% of TNP chauffeurs recorded 20-29 hours of trip time per week on average, and 3.1% of TNP chauffeurs were classified as Full-Time, or recorded 30 or more hours of trip time per week on average during the City Data Study Period. See Figure 18.

Figure 18: TNP Chauffeur Weekly Average Trip Time in Hours

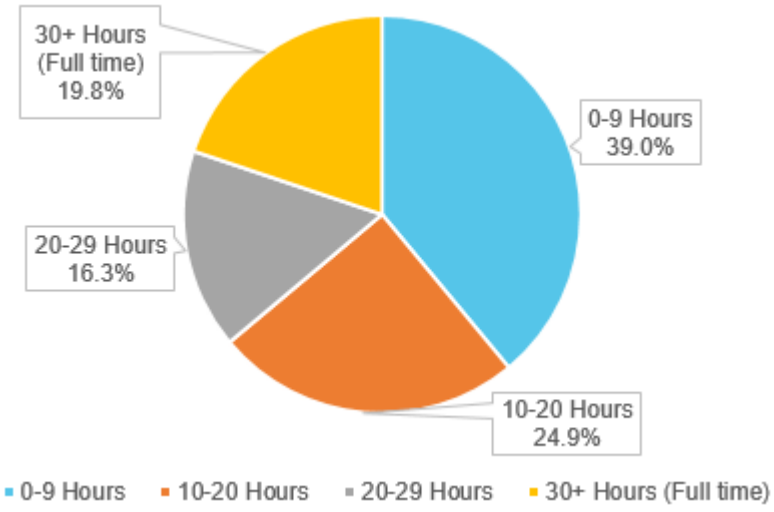
Average Total Trip Hours	Percentage of TNP Dataset
0-9	60.6%
10-19	26.0%
20-29	10.3%
30+ (Full time)	3.1%
Total	100.0%



When using *session* time as the basis by which to calculate operating hours, 39.0% of TNP chauffeurs recorded 0-9 hours of session time per week on average, 24.9% of TNP chauffeurs recorded 10-19 hours of session time per week on average, 16.3% of TNP chauffeurs recorded 20-29 hours of session time per week on average, and 19.8% of TNP chauffeurs recorded 30 or more hours of session time per week on average during the City Data Study Period. See Figure 19.

Figure 19: TNP Chauffeur Weekly Average Session Time in Hours

Average Total Session Hours	Percentage of TNP Dataset
0-9	39.0%
10-19	24.9%
20-29	16.3%
30+ (Full time)	19.8%
Total	100.0%



6g. Full-Time and Part-Time Chauffeur Hourly Earnings (Pre-Expenses)

Crowe calculated hourly earnings using trip and compensation data for full-time taxi and TNP chauffeurs using data from the City Data Study Period.

Full-Time TNP Chauffeurs

Crowe calculated hourly earnings for full-time and part-time TNP chauffeurs in two ways:

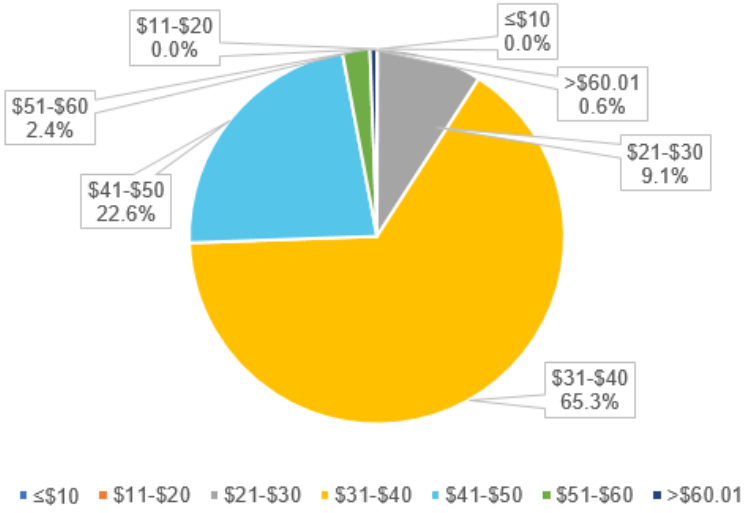
1. **TNP Hourly Earnings** = Total Compensation / Total *trip* Time (i.e., total time driving passengers)
2. **TNP Hourly Earnings** = Total Compensation / Total *session* Time (i.e., total time logged into the TNP application)

Total compensation was determined for full-time[13] and part-time[14] TNP chauffeurs using the following TNP trip fields: *Trip Pay, Tips, Tolls,* and *Other*[15] compensation fields. Crowe then calculated both total *trip* time and total *session* time by TNP chauffeur using TNP session and trip data from the City Data Study Period.

65.3% of full-time TNP chauffeurs earned between **$31-$40 per hour of *trip* time** (i.e., all time spent driving passengers), on average. Less than 0.5% of full-time TNP chauffeurs earned less than $20 per hour of trip time. 9.1% of full-time TNP chauffeurs earned between $21-30 per hour of trip time. See Figure 20 for additional hourly earnings information. These results may be useful for understanding how much TNP chauffeurs earn, on average, only while on trips with passengers; these calculations do not account for time spent waiting for passengers without earning money.

Figure 20: Full-Time TNP Chauffeur Average Hourly Earnings (Pre-Expenses) Based on Trip Time

Average Hourly Earnings Based on Trip Time	Percentage of Full-Time TNP Dataset
≤$10	0.0%
$11-$20	0.0%
$21-$30	9.1%
$31-$40	65.3%
$41-$50	22.6%
$51-$60	2.4%
>$60.01	0.6%
Total	100.0%



[13] Defined as chauffeurs who worked >=30 hours of Trip time per week during any City Data Study Period week.

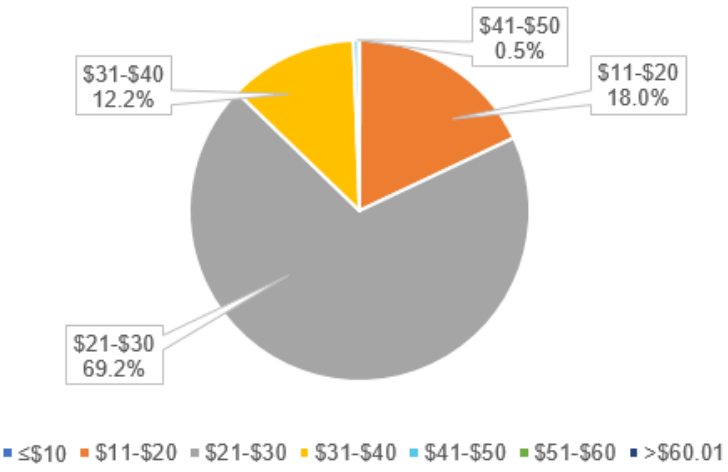
[14] Defined as chauffeurs who worked <30 hours of Trip time per week during any City Data Study Period week.

[15] Defined as "Total value of any other compensation that is not reflected by any other fields in the dataset, including incentives, bonuses and any other payments." See link here: https://chicago.github.io/tnp-reporting-manual/compensation/.

When using *session* time (i.e., all time logged into the TNP application) to analyze earnings, **69.2% of full-time TNP chauffeurs earned between $21-$30 per hour on average during the City Data Study Period.** 18.0% of full-time TNP chauffeurs earned between $11-20 per hour of session time on average, 0.0% of full-time TNP chauffeurs earned less than $10 per hour of session time on average, and 12.2% of full-time TNP chauffeurs earned between $31-$40 per hour of session time on average. Less than 1% of full-time TNP chauffeurs earned more than $41 per hour of session time. These results may be useful for understanding how much TNP chauffeurs earn when considering all time logged into a TNP application – including passenger/trip time and time logged into the application between trips.

Figure 21: Full-Time TNP Chauffeur Average Hourly Earnings (Pre-Expenses) Based on Session Time

Average Hourly Earnings Based on Session Time	Percentage of Full-Time TNP Dataset
≤$10	0.0%
$11-$20	18.0%
$21-$30	69.2%
$31-$40	12.2%
$41-$50	0.5%
$51-$60	0.0%
>$60.01	0.0%
Total	100.0%



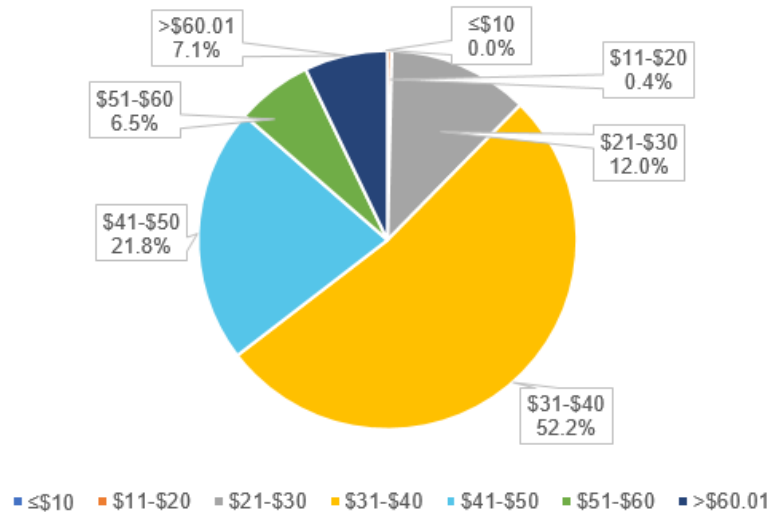
Part-Time TNP Chauffeurs

As previously noted in the report, this study focuses on earnings and other analysis for full-time chauffeurs. However, Crowe also analyzed average hourly earnings of part-time TNP chauffeurs to serve as a comparison for full-time chauffeurs, and because the large majority of TNP chauffeurs within the City Data Study Period operated in a part-time capacity**.**

More than half, or 52.2%, of part-time TNP chauffeurs (defined as those with <30 hours per week of trip time driving passengers) earned between **$31-$40 per hour of *trip* time** during the City Data Study Period. Less than 1% of part-time TNP chauffeurs on average earned less than $20 per hour of trip time. 12.0% of part-time TNP chauffeurs on average earned between $21-30 per hour of trip time. When compared to the full-time TNP average hourly earnings distribution, part-time TNP chauffeurs have larger percentages of TNP chauffeurs earning $51-$60 per hour (full-time: 2.4%; part-time: 6.5%) and >$60.01 (full-time: 0.6%; part-time: 7.1%). This may in part be explained by part-time chauffeur choices to strategically drive during the most lucrative driving hours (e.g., large events, popular commuting times, weekends, etc.) when they expect to earn more money. See Figure 22.

Figure 22: Part-Time TNP Chauffeur Average Hourly Earnings (Pre-Expenses) Based on Trip Time

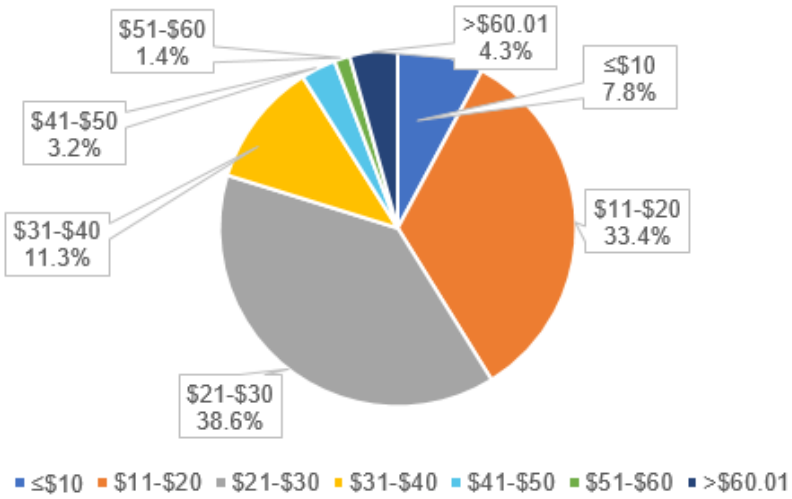
Part-Time TNP Chauffeur Average Hourly Earnings Based on Trip Time	Percentage of Part-Time TNP Dataset
≤$10	0.0%
$11-$20	0.4%
$21-$30	12.0%
$31-$40	52.2%
$41-$50	21.8%
$51-$60	6.5%
>$60.01	7.1%
Total	100.00%



Crowe also examined part-time TNP chauffeur average hourly earnings based on *session* time. **38.6% of part-time TNP chauffeurs** earned between **$21-$30 per hour of *session* time** (i.e., all time spent logged into the TNP application) during the City Data Study Period**.** 33.4% of part-time TNP chauffeurs earned between $11-20 per hour, 11.3% of part-time TNP chauffeurs earned between $31-40 per hour, and less than 10.0% of part-time TNP chauffeurs earned $41 or more per hour on average during the City Data Study Period. See Figure 23.

Figure 23: Part-Time TNP Chauffeur Average Hourly Earnings (Pre-Expenses) Based on Session Time

Part-Time TNP Chauffeur Average Hourly Earnings Based on session Time	Percent of Part-Time TNP Dataset
≤$10	7.8%
$11-$20	33.4%
$21-$30	38.6%
$31-$40	11.3%
$41-$50	3.2%
$51-$60	1.4%
>$60.01	4.3%
Total	100.0%



Full-Time Taxicab Chauffeurs

Crowe calculated hourly earnings for full-time taxi chauffeurs using taxi trip data. Crowe summed total taxi compensation by unique Public Chauffeur Number using the following fields: *Fare, Tips, Tolls,* and *Extras.*[16] Crowe converted the *Trip_Seconds* field to hours. The following calculation was used:

Taxicab Hourly Earnings = Total Compensation / Total *Trip* Time

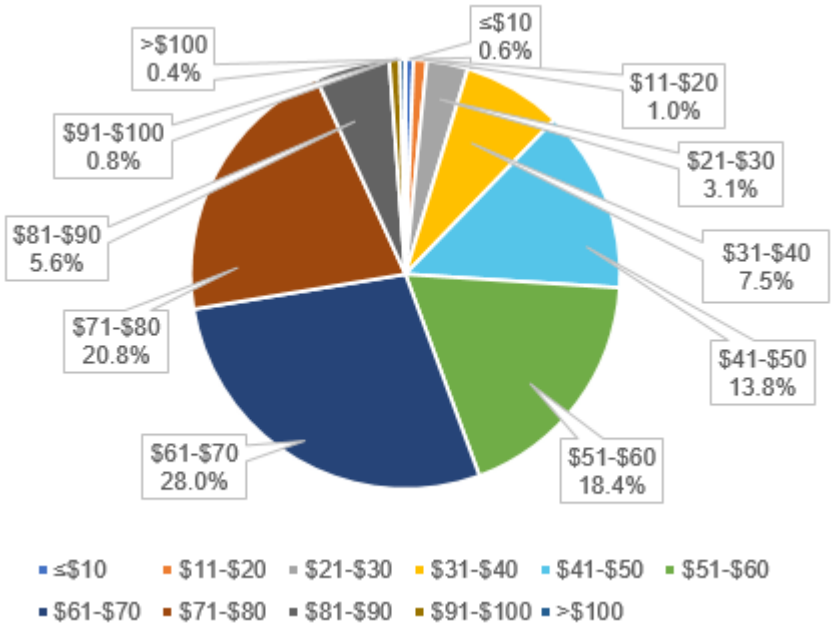
Crowe addressed known data outliers in the *Trip_Seconds* and *Fare* fields. In the taxi *Trip_Seconds* field, Crowe filtered out outliers, defined as trips >10 hours. This resulted in excluding 1,279 records, or 0.04% of all trip time. In the taxi *Fare* field, Crowe filtered out outliers, defined as trips with hourly earnings >$400 per hour. This resulted in excluding 35,446 records, or 1.3% of all trips.

At present, the City does not collect data from taxi companies that is comparable to TNP session data. Taxi trip data as presented in the PPV Study reflects metered time driving passengers only and will not capture other taxi chauffeur operating time, including time spent seeking or waiting for passengers or driving time between rides.

Most full-time taxi chauffeurs earned between $51-$80 per hour of trip time before expenses during the City Data Study Period. 18.4% of full-time taxi chauffeurs earned between $51-$60 per hour of trip time, 28.0% of full-time taxi chauffeurs earned between $61-$70 per hour of trip time, and 20.8% of full-time taxi chauffeurs between $71-80 per hour of trip time. Smaller percentages of full-time chauffeurs reported hourly earnings in other various ranges. See Figure 24 below.

Figure 24: Full-Time Taxi Chauffeur Average Hourly Earnings (Pre-Expenses) Based on Trip Time

Average Hourly Earnings Based on Trip Time	Percentage of Full-Time Taxi Dataset
≤$10	0.6%
$11-$20	1.0%
$21-$30	3.1%
$31-$40	7.5%
$41-$50	13.8%
$51-$60	18.4%
$61-$70	28.0%
$71-$80	20.8%
$81-$90	5.6%
$91-$100	0.8%
>$100	0.4%
Total	100.0%



[16] Defined as "extra charges for the trip" via the City Data Portal. See link here: https://data.cityofchicago.org/Transportation/Taxi-Trips/wrvz-psew.

6h. Full-Time Chauffeur Weekly Earnings

Crowe also calculated weekly earnings using trip and compensation data for full-time taxi and TNP chauffeurs during the City Data Study Period.

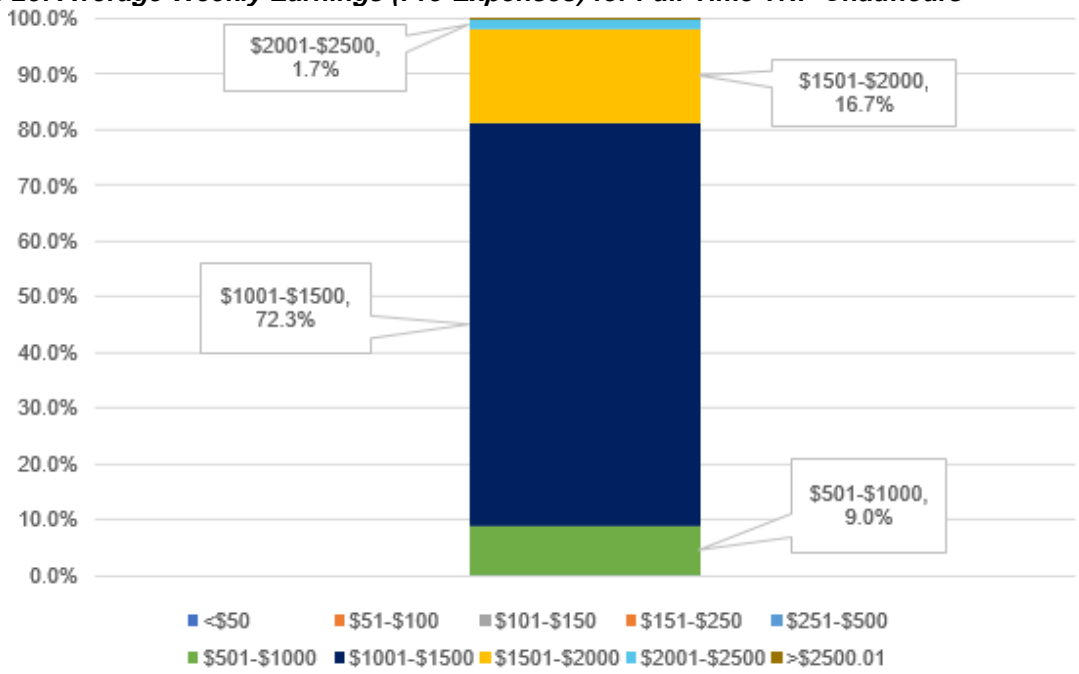
Full-Time TNP Chauffeurs

Crowe calculated average weekly earnings for full-time TNP chauffeurs during each City Data Study Period week. Crowe calculated total compensation for each unique full-time TNP chauffeur (determined by Driver's License Number) for each week. Crowe calculated compensation using the following TNP trip fields: *Trip Pay, Tips, Tolls,* and *Other Compensation*[17].

During the City Data Study Period, full-time TNP chauffeurs earned $1,077 per week on average.

The majority (72.3%) of full-time TNP chauffeurs (defined as ≥30 hours of trip time) earned between $1001-$1500 per week on average during City Data Study Period weeks. See Figure 25.

Figure 25: Average Weekly Earnings (Pre-Expenses) for Full-Time TNP Chauffeurs[18]



Average Full-Time TNP Chauffeur Weekly Earnings (Pre-Expenses) Based on Trip Time	Percentage of Full-Time TNP Chauffeurs (those with ≥30 hours of Trip time)
$0-$500	0.0%
$501-$1000	9.0%
$1001-$1500	72.3%
$1501-$2000	16.7%
$2001-$2500	1.7%
>$2500.01	0.3%
Total	100.0%

[17] Defined as "Total value of any other compensation that is not reflected by any other fields in the dataset, including incentives, bonuses and any other payments." See link here: https://chicago.github.io/tnp-reporting-manual/compensation/.
[18] Figure 25 does not include data labels for average weekly earnings buckets with less than 1% chauffeur representation.

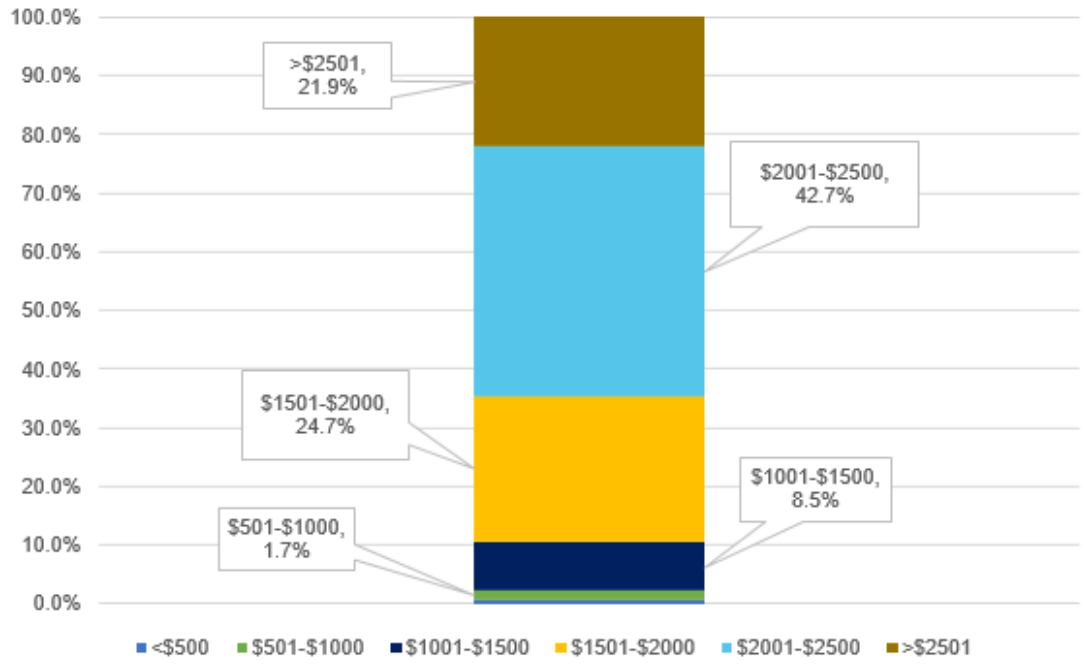
Full-Time Taxicab Chauffeurs

Crowe also calculated average weekly earnings for full-time taxi chauffeurs for each week. Crowe summed taxi compensation by full-time taxi chauffeur using the following fields: *Fare, Tips, Tolls,* and *Extras*[19] for trips within the City Data Study Period.

During the City Data Study Period, full-time taxi chauffeurs earned $2,270 per week on average.

The largest share (42.7%) of full-time taxi chauffeurs (defined as ≥30 hours of trip time) earned between $2001-$2500 per week on average during City Data Study Period weeks. See Figure 26.

Figure 26: Average Weekly Earnings (Pre-Expenses) for Full-Time Taxi Chauffeurs[20]



Average Full-Time Taxi Chauffeur Weekly Earnings (Pre-Expenses) Based on Trip Time	Percentage of Full-Time Taxi Chauffeurs (those with ≥30 hours of Trip time)
≤$500	0.5%
$501-$1000	1.7%
$1001-$1500	8.5%
$1501-$2000	24.7%
$2001-$2500	42.7%
>$2501	21.9%
Total	100.0%

[19] Defined as "extra charges for the trip" via the City Data Portal. See link here: https://data.cityofchicago.org/Transportation/Taxi-Trips/wrvz-psew.

[20] Figure 26 does not include data labels for average weekly earnings buckets with less than 1% chauffeur representation.

6i. Full-Time Chauffeur Expenses

Expense Methodology

The City does not collect data related to chauffeur expenses. Therefore, this study considered the following inputs to inform full-time chauffeur expense estimates:

> Fixed expenses, including 2019 City licensing and registration fees. This study assumes that, for full-time chauffeurs, 100% of these expenses are attributed to operating as a chauffeur, rather than any incidental personal or non-chauffeur usage. This study excluded one-time start-up costs, such as any costs associated with a public chauffeur training course, licensing exam, fingerprinting, as part of this estimate. As shown in Figure 1 of this report, most fixed costs for taxicabs are paid by the medallion owner. A traditional lease taxi chauffeur is responsible for a $5 chauffeur license fee every two years. On a weekly basis, this would be approximately $0.05 per week, which is not material to the calculations in this report. As shown in Figure 2 of this report, all TNP fixed costs are paid by the TNP companies on behalf of their affiliated chauffeurs. As such, there are no fixed expenses included in the expense calculations in this report.
>
> Variable expenses, estimated by multiplying average trip miles by full-time chauffeurs during the City Data Study Period by the 2019 Internal Revenue Service (IRS) mileage reimbursement rate of $0.58 per mile. Because operating expenses are estimated based on trip miles driven as a chauffeur, this study attributes these expenses to operating as a chauffeur, rather than any incidental personal or non-chauffeur usage. (Note this study was completed before the sharp increase in market gas prices that occurred in the second quarter of 2022.)

The IRS mileage reimbursement is used to compute "the deductible costs of operating an automobile for business, charitable, medical, or moving expense purposes, and for substantiating, under § 274(d) of the Internal Revenue Code and § 1.274-5, the amount of ordinary and necessary business expenses of local transportation or travel away from home."[21] This study assumes this reimbursement covers all lease/loan, fuel, maintenance, insurance, and other vehicle operating expenses for chauffeur trip time.

Using the IRS reimbursement rate is a standard, generally accepted practice for estimating vehicle operating costs, but the approach does have limitations. The federal IRS standard may over- or underestimate Chicago-area cost realities (i.e., fuel, maintenance, etc.) and may over- or underestimate expenses for certain vehicle types. Specifically, we note that certain stakeholders have inquired whether the IRS reimbursement rate over-relies on the costs of operating a pickup truck, which is a common vehicle in the United States generally but an uncommon vehicle for TNP and taxi chauffeurs in Chicago. A PPV chauffeur operating a fuel-efficient sedan, for example, may have lower than average operating expenses than a driver operating a Ford F150 pickup truck. In that scenario, the IRS reimbursement rate may overestimate expenses. Researchers considered, however, that the IRS reimbursement rate is a leading nationwide resource for estimating vehicle operating expenses, and purportedly serves as an average across various vehicle types, geographies, and market fluctuations.

In addition, we note that this methodology applies the IRS reimbursement rate to the average miles driven by chauffeurs using TNP and taxi *trip* data, which is reflective of driving time *with* passengers. Thus, we are only attributing expenses such as insurance, fuel, and wear and tear to miles driven with passengers. Chauffeurs must also drive to initially pick-up a passenger; these miles are not included in trip time, and as such our approach to using trip miles may underestimate expenses.

We note that two studies in other cities have attributed operating expenses to chauffeurs comparable to this PPV Study in Chicago. Parrott and Reich authored studies in New York City (2018) and Seattle (2020), in both cases developing expense models based on various inputs (including chauffeur vehicle

[21] Internal Revenue Service (December 14, 2018). *Notice 2019-02: 2019 Standard Mileage Rates*. https://www.irs.gov/pub/irs-drop/n-19-02.pdf.

types) and data sources (including fixed administrative information and results of a driver survey). For New York City, Parrott and Reich determined that operating expenses averaged $0.538 per mile and wrote this was "remarkably close to the 54.5 cents figure for 2018 allowed by the IRS." For Seattle, Parrott and Reich determined that operating expenses averaged $0.523 per mile. Both of these figures are comparable to the $0.58 per mile rate being used in Chicago's PPV Study calculations. A separate study of Seattle conducted by Hyman et al developed a unique marginal cost model and applied the notably lower rate of $0.19 per mile to chauffeur operating expenses.

This study did not calculate expenses for part-time chauffeurs, as there is significant diversity in part-time chauffeur profiles and variables, including vehicle use and expenses. Given the importance of full-time chauffeurs from a policy and earnings standpoint, this report prioritized analysis of full-time chauffeur expenses and net earnings.

Expense Results

Full-time taxi chauffeurs in the City Data Study Period drove 556 miles per week on average. Multiplying this by the 2019 IRS mileage reimbursement rate of $0.58 per mile estimates that a full-time taxi chauffeur incurs approximately **$322 per week** of operating expenses. Full-time taxi chauffeurs in the City Data Study Period drove **39.08 hours with passengers per week on average** (based on trip time). Therefore, a full-time taxi chauffeur incurs an estimated **$8.24 per hour** in operating expenses.

Full-time TNP chauffeurs in the City Data Study Period drove 737 miles per week on average. Multiplying this by the 2019 IRS mileage reimbursement rate of $0.58 per mile estimates that a full-time TNP chauffeur incurs approximately **$427 per week** of operating expenses. Full-time TNP chauffeurs in the City Data Study Period drove **35.29 hours with passengers per week on average** (based on trip time). Therefore, a full-time TNP chauffeur incurs an estimated **$12.10 per hour** in operating expenses.

Again, please note this study was completed before the sharp increase in market gas prices that occurred in the second quarter of 2022.

6j. Full-Time Chauffeur Net Weekly Earnings

Crowe estimated full-time chauffeur net weekly earnings using the following approach:

> **Approximate Net Weekly Earnings** = Weekly earnings for full-time chauffeurs (*from Section 6h*) – estimated weekly expenses for full-time chauffeurs (*from Section 6i*)

Approximate Full-Time Taxi Chauffeur Net Weekly Earnings After Expenses

During the City Data Study Period, **average net weekly earnings for a full-time taxi chauffeur equaled approximately $1,948.**

$1,948 = $2,270 (*average weekly earnings*) – $322 (*average estimated expenses*)

Approximate Full-Time TNP Chauffeur Net Weekly Earnings After Expenses

During the City Data Study Period, **average net weekly earnings for a full-time TNP chauffeur equaled approximately $650.**

$650 = $1,077 (*average weekly earnings*) – $427 (*average estimated expenses*)

6k. Full-Time Chauffeur Net Hourly Earnings

Crowe estimated full-time chauffeur net hourly earnings using the following approach:

> **Approximate Net Hourly Earnings** = Hourly earnings for full-time chauffeurs *(from Figs. 20 and 24)* – estimated hourly expenses for full-time chauffeurs (*from Section 6i*)

Approximate Full-Time Taxi Chauffeur Net Hourly Earnings After Expenses

In Figure 27 below, the first column presents the average hourly earnings based on trip time for full-time taxi chauffeurs, as first presented in Figure 24 of this report. The table then deducts $8.24 in operating expenses per hour (second column), resulting in the average net earnings per hour (third column).

The largest portion of full-time taxi chauffeurs (28.00%) earned approximately $52.76-$61.76 net pay per passenger hour after expenses. Note that these calculations only represent average estimated earnings while a chauffeur is on trips with passengers; the calculations do not account for time spent waiting for passengers without earning money.

Figure 27: Full-Time Taxi Chauffeur Average Net Hourly Earnings

Average Hourly Earnings Based on Trip Time	Estimated Hourly Expenses	Average Net Earnings Per Hour	Percentage of Full-Time Taxi Dataset
≤$10	$8.24	≤$1.76	0.60%
$11-$20		$2.76-$11.76	1.00%
$21-$30		$12.76-$21.76	3.10%
$31-$40		$22.76-$31.76	7.50%
$41-$50		$32.76-$41.76	13.80%
$51-$60		$42.76-$51.76	18.40%
$61-$70		$52.76-$61.76	28.00%
$71-$80		$62.76-$71.76	20.80%
$81-$90		$72.76-$81.76	5.60%
$91-$100		$82.76-$91.76	0.80%
>$100		>$91.76	0.40%
Total			100.00%

Approximate Full-Time TNP Chauffeur Net Hourly Earnings After Expenses

In Figure 28 below, the first column presents the average hourly earnings based on trip time for full-time TNP chauffeurs, as first presented in Figure 20 of this report. The table then deducts $12.10 in operating expenses per hour (second column), resulting in the average net earnings per hour (third column).

The largest portion of full-time TNP chauffeurs (65.30%) earned approximately $18.90-$27.90 net pay per passenger hour after expenses. Note that these calculations only represent average estimated earnings while a chauffeur is on trips with passengers; the calculations do not account for time spent waiting for passengers without earning money.

Figure 28: Full-Time TNP Chauffeur Average Net Hourly Earnings

Average Hourly Earnings Based on Trip Time	Estimated Hourly Expenses	Average Net Earnings Per Hour	Percentage of Full-Time TNP Dataset
≤$10	$12.10	Expenses may exceed earnings	0.00%
$11-$20		≤$7.90	0.00%
$21-$30		$8.90-$17.90	9.10%
$31-$40		$18.90-$27.90	65.30%
$41-$50		$28.90-$37.90	22.60%
$51-$60		$38.90-$47.90	2.40%
>$60		>$47.90	0.60%
Total			100.00%

Using the City data, we observed that full-time taxi chauffeur net earnings during the City Data Study Period appear to be almost double that of full-time TNP chauffeurs. This may be partly driven by higher fare prices for taxis, on average, during the City Data Study Period. The difference in net earnings between full-time TNP and full-time taxi chauffeurs could also be driven by differences in estimated expenses, as full-time taxi chauffeurs drove fewer miles with passengers on average than full-time TNP chauffeurs during the City Data Study Period.

As stated earlier, this study did not calculate expenses for part-time chauffeurs, as there is significant diversity in part-time chauffeur profiles and variables, including vehicle use and expenses. Given the importance of full-time chauffeurs from a policy and earnings standpoint, this report prioritized analysis of full-time chauffeur expenses and net earnings.

7. Results: Other Chauffeur & License Holder Conditions

The PPV Study analyzed additional chauffeur and license holder conditions other than earnings and expenses. These other conditions include non-monetary benefits, chauffeur health and safety, chauffeur supply, operating hours, trips provided, and other industry challenges.

Where available, this section uses the City's PPV industry data. However due to the nature of these other conditions, this section also incorporates insights from the City's Public Chauffeur Survey in March 2021 on topics such as chauffeur concerns, motivations, and perceptions.

7a. Non-Monetary Benefits

To understand non-monetary benefits available to public chauffeurs, this section reviews industry information and summarizes benefits reportedly available. This section then incorporates results from the Public Chauffeur Survey for insight into chauffeurs' self-reported perceptions of non-monetary benefits.

Livery, TNP, and taxi chauffeurs have access to different non-monetary benefits, largely influenced by worker classification and company offerings.[22] Livery chauffeurs are most often classified as employees. This means that an employer must withhold income taxes and pay Social Security, Medicare taxes and unemployment tax on wages paid to an employee. TNP and taxicab chauffeurs are most often classified as independent contractors. Companies typically do not have to withhold or pay taxes on payments to independent contractors. Independent contractors are not legally required to receive certain employer-sponsored benefits, such as overtime, employer-sponsored health benefits, paid sick time, or bargaining rights. The earnings of an independent contractor are subject to self-employment tax.[23]

While some companies offer paid vacations or medical insurance, most taxi and TNP chauffeurs do not receive comprehensive employment benefits. TNP companies may provide access to various platforms which help TNP chauffeurs identify health insurance options and compare costs across plans. [24, 25]

We note that there has been recent public debate, especially in the State of California, related to the worker classification of public chauffeurs. In 2019, the state passed Assembly Bill 5 (AB5), which established a three-factor test to determine independent contractor status.[26] In effect, TNP chauffeurs did not meet the criteria for independent contractors and in effect would have been required to be treated as employees. The following year, the Superior Court of San Francisco determined that Uber and Lyft were not in compliance with AB5, a ruling which was upheld by the California First District Court of Appeals. After this, the companies stated intentions to pause operations in the state. This led to a campaign for the voter referendum Proposition 22, which was heavily financed by various industry parties. (Several gig economy companies funded campaigns in favor of Proposition 22, while various labor affiliates funded campaigns opposing the measure.) In November 2020, California voters passed Proposition 22, which recognizes app-based drivers as independent contractors and mandates certain protections and benefits, including health insurance subsidies[27], for app-based drivers in California. Proposition 22 also specified that TNP chauffeurs would earn at least 120% of the minimum wage and 30¢ per mile for working time driving passengers, and that chauffeurs would be covered for job-related injuries through occupational

[22] Internal Revenue Service (June 16, 2021). *Understanding Employee vs. Contractor Designation*. https://www.irs.gov/newsroom/understanding-employee-vs-contractor-designation.
[23] Internal Revenue Service (June 16, 2021). *Understanding Employee vs. Contractor Designation*. https://www.irs.gov/newsroom/understanding-employee-vs-contractor-designation.
[24] Uber. *Health Insurance Marketplace for Driving Rewards*. https://help.uber.com/driving-and-delivering/article/health-insurance-marketplace-for-driving-rewards?nodeId=5e4465bf-65b9-488d-85c0-12cd40281c8e.
[25] Uber Blog. *Time to enroll in the Health Insurance Marketplace*. May 26, 2020. https://www.uber.com/en-US/blog/health-insurance/.
[26] BallotPedia. *California Proposition 22, App-Based Drivers as Contractors and Labor Policies Initiative (2020)*. https://ballotpedia.org/California_Proposition_22,_App-Based_Drivers_as_Contractors_and_Labor_Policies_Initiative_(2020)
[27] Chauffeurs with at least 15 hours/week of driving time with passengers over the course of a quarter (Jan-Mar, Apr-Jun, Jul-Sep, Oct-Dec), and are enrolled in a qualifying health plan, could receive a subsidy of up to $600 per quarter (up to $2,400 for the year). For those chauffeurs with at least 25 hours/week of driving time with passengers in California, this subsidy goes up to $1,200 per quarter (up to $4,800 for the year).

accident insurance. In 2021, the Alameda Superior Court of California ruled that Proposition 22 violates the California constitution and must be struck down in its entirety. California will defend the ballot measure in a state appellate court in 2022, and the future of the law is unclear.[28]

While not legally mandated, TNP companies do offer other benefits for chauffeurs, often in the form of company rewards programs. These rewards programs often incentivize TNP chauffeurs to drive during peak hours, complete a certain number of trips, and/or maintain high "driver ratings" in return for discounted vehicles maintenance services, discounted monthly phone bill options, and other benefits.[29]

The Public Chauffeur Survey asked chauffeurs about the importance of benefits as a potential means to improve chauffeur conditions. In the Public Chauffeur Survey, 20% of respondents identified "Increased benefits" as a way to improve chauffeur conditions. This was selected less frequently than "Increased earnings" (selected by 55% of respondents), "Knowing destination before accepting rides" (selected by 40% of respondents), and "More safety precautions" (selected by 29% of respondents). See ***Public Chauffeur Survey Results Summary,*** provided under separate cover.

When asked about health insurance, only 2% of Public Chauffeur Survey respondents reported having health insurance through their chauffeur company. 30% of respondents reported having Medicaid or Medicare insurance, 26% reported not having medical insurance and paying all medical expenses out of pocket, 18% reported having medical insurance through employers (non-chauffeur or TNP), 12% reported paying for insurance themselves, and 12% reported having insurance through a family member. See ***Public Chauffeur Survey Results Summary,*** provided under separate cover.

7b. Chauffeur Health & Safety

The following section uses results from the Public Chauffeur Survey for insight into chauffeurs' perceptions of health and safety. We also review recent news reporting in Chicago and across the country as it pertains to chauffeur health and safety.

Chauffeurs reported a variety of concerns related to health and safety on the Public Chauffeur Survey. See ***Public Chauffeur Survey Results Summary,*** provided under separate cover, for concerns about operating as a chauffeur after the COVID-19 pandemic subsides. As shown on that figure, 48% of taxicab, 41% of TNP, and 49% of livery respondents selected "Personal health (risk of illness)" as a main concern. In addition, 47% of taxicab, 66% of TNP, and 42% of livery respondents selected "Personal safety (risk of crime)" as a main concern.

Personal Health
Survey responses also highlighted the perceived risks of COVID-19 exposure to chauffeurs. Almost 80% of TNP respondents, 60% of livery respondents, and 29% of taxicab respondents reported becoming sick with COVID-19 or needing to quarantine due to COVID-19 exposure. The survey did not ask chauffeurs to specify if their COVID-19 infection or potential exposure originated from operating as a chauffeur or personal circumstances. See ***Public Chauffeur Survey Results Summary,*** provided under separate cover.

Personal Safety
TNP companies have instituted policies and features to improve safety for passengers and chauffeurs. These include emergency 911 features that send information such as location, license plate, and car model to a dispatcher if a driver or rider taps the button; location updates to third parties (such as family/friends) at the request of a passenger; and passenger verification programs. TNP companies require annual background checks for their chauffeurs, ongoing criminal monitoring, and a mandatory training program for chauffeurs with RAINN, an anti-sexual violence organization. In March 2021, Lyft and

[28] Roosevelt, Margot and Suhauna Hussain (August 20, 2021). "Prop. 22 is Ruled Unconstitutional, a Blow to California Gig Economy Law." *Las Angeles Times*.
[29] Lyft. *Lyft Rewards for Drivers*. https://www.lyft.com/driver/rewards.

Uber announced the Industry Sharing Safety Program, an initiative intended to share information about chauffeurs removed from the platforms due to safety incidents surrounding sexual and physical assaults resulting in fatalities.[30] In addition, Uber has a "Safety Toolkit" in-app emergency feature in place and recently added a 911 feature that sends the location, license plate and car model to a dispatcher if a driver or rider taps the button.[31] Lyft has a similar feature in which a passenger can tap a button to share their approximate location and ride information with the passenger's contacts.[32]

Police data from the City data portal on vehicular hijackings demonstrates the increase in carjackings in Chicago over the past few years, similar to other U.S. Cities.[33] There was a 134% increase in vehicular hijackings between 2019 and 2020.

In response to the national trend of increased carjackings and in an effort to better protect chauffeurs and passengers, the Chicago Police Department expanded the Vehicular Hijacking Task Force in 2021. The Task Force consists of Chicago Police, Cook County Sheriffs, Illinois State Police, and federal law enforcement professionals who specialize in the investigation of robbery and violent crime cases. As part of this expansion, in March 2021 the Chicago Police Department also announced the launch of a new website for combating the City's continuous carjackings, providing a space to better report the crimes and view photographs of offenders.

Uber also launched a new passenger verification program in April 2021.[35] Passengers who use anonymous payment methods (like prepaid debit cards or gift cards) now must also upload a driver's license, state identification, or passport before booking a ride. Their identification will be checked for validity.

7c. Chauffeur Supply

This section summarizes the number of active taxicab and TNP chauffeurs operating in Chicago, and how that supply level has changed over time. (Data for active livery drivers is not available.) Specifically, this section reviews taxicab and TNP chauffeur participation levels since 2014 (when TNPs first entered the Chicago market), and how the participation level has changed as a result of the COVID-19 pandemic. The primary input to this section was City of Chicago industry data, including internal City dashboards and visualizations.

The PPV industry has undergone significant changes in recent years as a growing number of mobility services have entered the Chicago marketplace. Utilization of PPVs, especially TNPs, has grown rapidly due to advancements in on-demand app-based services.

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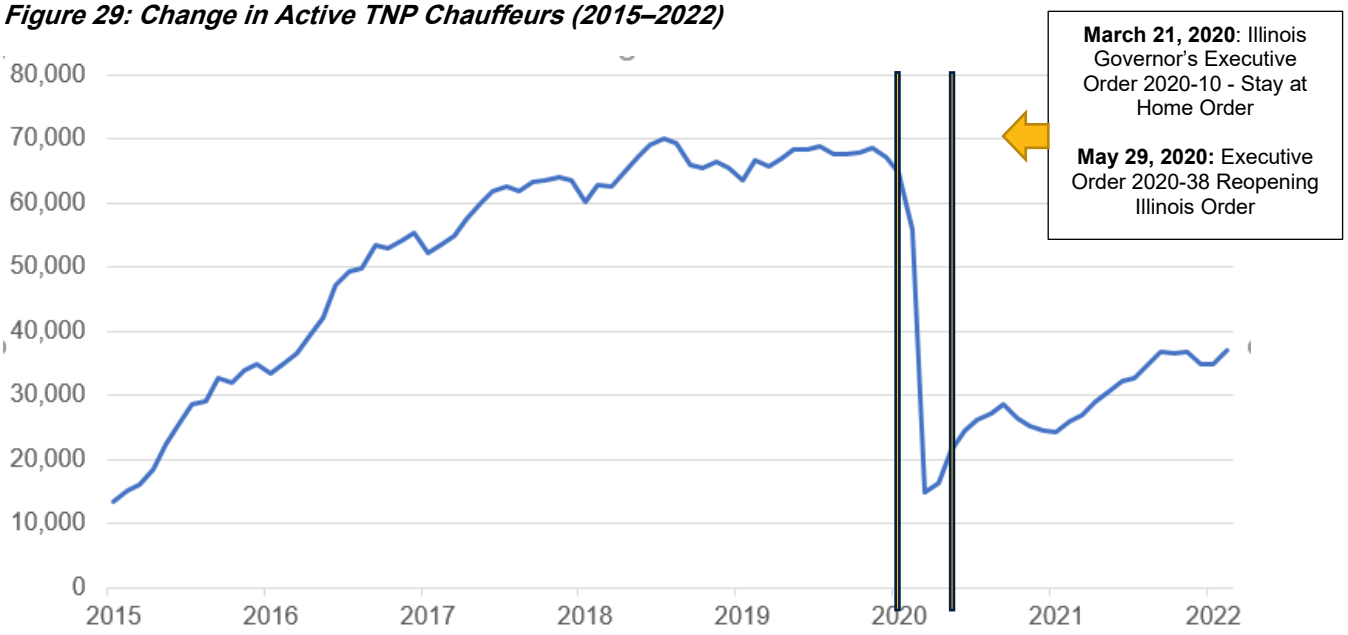
[30] "*Lyft and Uber Launch Industry Sharing Safety Program in the US*. Lyft. (2021, March 11). https://www.lyft.com/blog/posts/lyft-and-uber-launch-industry-sharing-safety-program-in-the-us.
[31] Uber. *Safety Toolkit and App Safety Features for Riders*. https://www.uber.com/za/en/ride/safety/rider-safety-features/
[32] Lyft. *Sharing your driving location with friends and family*. https://help.lyft.com/hc/e/articles/360037644574-Sharing-your-location-with-trusted-contacts.
[33] Chicago Crime Incidents: Carjackings (Vehicular Hijacking). https://data.cityofchicago.org/
[34] CNN. *Cities see large increases in carjackings during pandemic*. (2022, January 23). www.cnn.com/2022/01/23/us/carjackings-rise-major-cities-pandemic/index.html
[35] *Launching New Rider Verification Feature to Enhance Safety on the Road*. Uber (2021, April 9). https://www.uber.com/en-US/blog/rider-verification-feature/.

The following key results are included in this section:

- Between March – April 2020, there was an 84% decrease in reported active taxi chauffeurs and a 73% decrease in reported active TNP chauffeurs.
- In 2021, news media and TNP companies reported a TNP chauffeur shortage amid increased passenger demand as vaccination rates in Chicago rose, the number of COVID-19 infections fell, and various COVID-19 restrictions like capacity caps and other restrictions on indoor dining loosened
- Results from the Public Chauffeur Survey demonstrate an increase in PPV chauffeurs who pursued earnings opportunities as a restaurant food delivery driver. When asked "What else describes you?," 8% of survey respondents selected restaurant food delivery driver before the COVID-19 pandemic as compared to 17% of respondents who selected this answer during the COVID-19 pandemic, reflecting an increase of 113%.

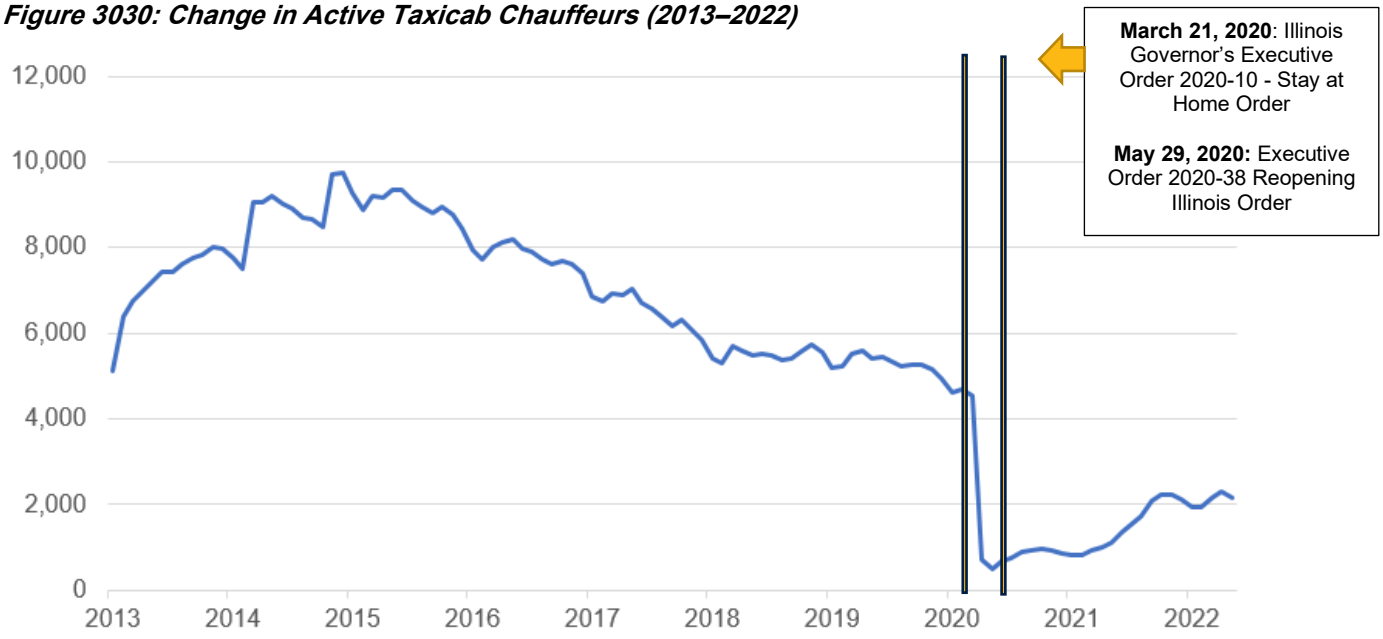
In February 2015, the first month for which the City has available data for active TNP chauffeurs, the City reported 13,379 active TNP chauffeurs. In January 2019, the City reported 65,465 active TNP chauffeurs – an increase of 52,086 or 390% in four (4) years. This number increased slightly almost every month of 2019, and in January 2020 the City reported 67,185 active TNP chauffeurs. See Figure 29.

Figure 29: Change in Active TNP Chauffeurs (2015–2022)



When comparing these numbers to the taxi industry, in February 2015 the City reported 8,894 active taxicab chauffeurs. Since February 2015, the number of active taxicab chauffeurs has declined. In January of 2019, the City reported 5,179 active taxicab chauffeurs. This number increased slightly or stayed relatively stable for the first months of 2019 and began to decrease slightly throughout the later part of the year. In January 2020 the City reported 4,627 active taxicab chauffeurs.[36] See Figure 30.

Figure 3030: Change in Active Taxicab Chauffeurs (2013–2022)



COVID Impacts on Chauffeur Participation

The COVID-19 pandemic and resulting economic crisis beginning in early Spring 2020 severely impacted PPV chauffeurs, with a substantial downward shift in the number of active taxicab and TNP chauffeurs occurring between March and April of 2020. In March 2020, the City reported 4,559 active taxicab chauffeurs; in April 2020 this number dropped to 724, representing an 84% decrease in the supply of active taxicab chauffeurs. The City reported 55,197 active TNP chauffeurs in March 2020; in April 2020, this number dropped to 14,765, representing a 73% decrease in the supply of active TNP chauffeurs. See Figures 29 and 30.

The Public Chauffeur Survey provided insight into the motivations individual chauffeurs may have for operating as a chauffeur, and how these motivations shifted before versus during the COVID-19 pandemic. Notably, almost the same percentage of survey respondents answered that they operate as a chauffeur to "*earn money for basic living costs*" during COVID-19 (67%) compared to before COVID-19 (66%); and fewer survey respondents answered that they operate as a chauffeur to *"earn supplemental income*" during COVID-19 (35%) compared to before COVID-19 (60%). This suggested a possible shift from chauffeurs who are primarily motivated by supplemental income to chauffeurs motivated by other reasons related to the pandemic and economic downturn. Please see ***Public Chauffeur Survey Results Summary*** provided under separate cover.

The industry responded to the decreased demand and other economic effects of COVID-19 in various ways. In March 2020, Lyft and Uber temporarily decided to suspend shared rides in multiple major cities, including Chicago. Uber also reported decreased marketing campaign funds designed to recruit

[36] Comparable data was unavailable for liveries.

chauffeurs.[37] However, in recent months, news media and TNP companies have reported a growing TNP chauffeur shortage amid increased passenger demand[38] as vaccination rates in Chicago rise, the number of COVID-19 infections fall, and various public health restrictions (like capacity limitations on indoor dining) loosen.[39] Shared rides also resumed in Chicago and other cities in July 2021.[40] To help meet reported increased rider demand, in April 2021 Uber announced an increase in chauffeur incentives worth $250 million. Uber has also announced other measures designed to attract chauffeurs, like continuing the requirement that all riders wear face masks despite rising vaccination rates.[41]

The Public Chauffeur Survey inquired about chauffeurs' likelihood of continuing to operate as a chauffeur once the COVID-19 pandemic stabilizes. Over half of respondents said they are "extremely likely" (34%) or "very likely" (22%) to continue operating as chauffeurs. Please see ***Public Chauffeur Survey Results Summary*** provided under separate cover.

[37] Chapman, Lizette (March 18, 2020). "Uber Cuts Spending; Lyft Stops Adding Drivers in Many Cities." Bloomberg.com, Bloomberg. https://www.bloomberg.com/news/articles/2020-03-18/lyft-stops-adding-new-drivers-in-major-cities-as-demand-falls
[38] Dean, Grace (June 1, 2021). "Uber and Lyft fares surge by up to 40% as the ride-hailing apps struggle to find enough drivers." Businessinsider.com. https://www.businessinsider.com/uber-lyft-fares-price-driver-shortage-travel-ride-hailing-app-2021-6.
[39] "Phase 5 Illinois: Here Are the Guidelines for Reopening This Week." NBCUniversal Media, 7 June 2021, https://www.nbcchicago.com/news/local/illinois-phase-5-here-are-the-guidelines-for-reopening-this-week/2526840//
[40] Bellon, Tina (July 15, 2021). *Lyft to resume shared rides in U.S. for first time since pandemic.* https://www.reuters.com/business/autos-transportation/lyft-resume-shared-rides-us-first-time-since-pandemic-2021-07-15/.
[41] Cinelli, D. (2021, April 23). *Getting Drivers Back on the Road*. https://www.uber.com/newsroom/getting-drivers-back-on-the-road/

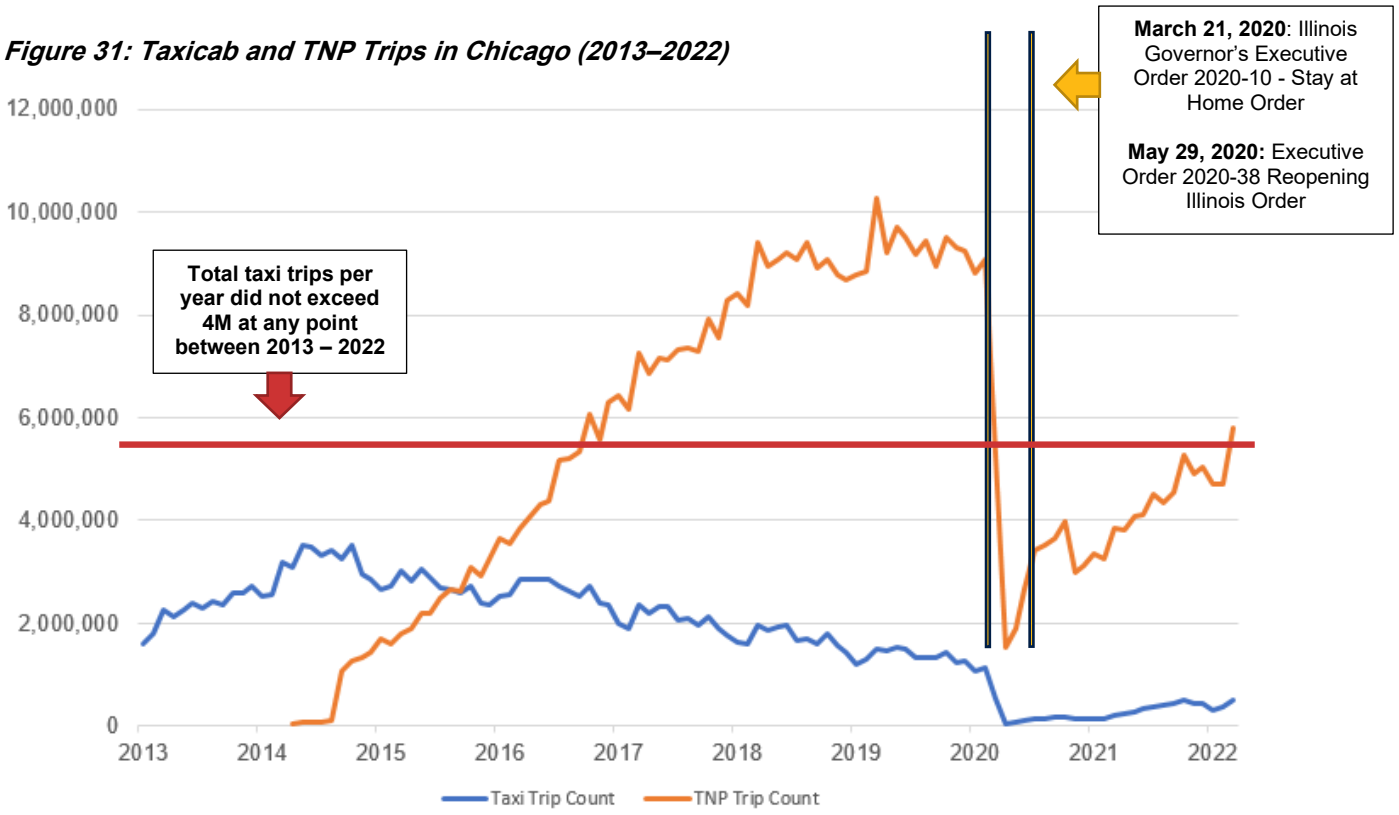
7d. Trips Provided

This section summarizes the number of taxicab and TNP trips provided in Chicago over time. (Data for livery trips is not available.) Specifically, this section reviews taxicab and TNP chauffeur participation levels since 2014 (when TNPs first entered the Chicago market), and how the number of trips has changed as a result of the COVID-19 pandemic. The primary input to this section was City of Chicago industry data from internal City dashboards and visualizations.

From 2013 until May 2021, TNPs and taxicab chauffeurs provided more than 650 million trips in the City of Chicago. Taxicab trips account for more than 196 million of this total, while TNP trips account for more than 450 million.

Since their widespread adoption in Chicago in 2015, TNP use in the City has sharply increased at the same time as taxi trips have slowly declined, as seen in Figure 31 below. The addition of TNPs to the market likely reduced some demand for taxicab trips, public transit, personal/solo driving, etc. and may have also created new demand for PPV trips that didn't exist previously. This graph also demonstrates that the TNP industry's growth in Chicago also resulted in an overall increase of trips in Chicago. TNPs may have converted some taxicab trips to TNP trips, but this data suggests that a notable portion of TNP trips following 2015 were new trips from passengers not served by taxicabs in the past. Specifically, as shown below, prior to 2015, there were no more than 4 million taxi trips recorded in any year.

Figure 31: Taxicab and TNP Trips in Chicago (2013–2022)



The impact of COVID-19 resulted in a significant decrease in the number of taxicab and TNP trips in the City of Chicago. In February 2020, the month immediately before the Illinois Governor's COVID-19 Stay at Home Order, Chicago TNP chauffeurs provided approximately 9 million trips. In October 2020, Chicago TNP chauffeurs provided approximately 3.9 million trips.

This correlates with the decrease in the number of TNP and taxicab chauffeurs active in the City in March 2020 and is consistent with other research about passengers. For example, the Illinois Economic Policy Institute and University of Illinois Project for Middle Class Renewal found the number of TNP passengers fell by between 60% and 75%in the second quarter of 2020.[42]

7e. Industry Challenges

This section summarizes challenges in the PPV industry, drawing primarily from stakeholder meetings, industry and other secondary research, and chauffeur perceptions reported in the Public Chauffeur Survey.

During the initial phases of the PPV Study, BACP sought community and stakeholder feedback on industry challenges.

PPV chauffeurs, license holders, and other industry stakeholders reported various industry challenges related to the increased PPV industry competition, frustrations related to earnings and PPV related expenses, concerns with the impact of future legislation relating to gig economy workers, and other safety / health considerations. Although taxicab, TNP, and livery chauffeurs report similar concerns, particularly those related to compensation and expenses, there were also unique concerns for each PPV group (as discussed in sections below).

Beginning in 2014, the transportation industry in Chicago experienced significant growth and competition with the emergence of on-demand mobile application providers like Lyft, Uber, and Via. Many taxi and livery chauffeur advocates claim that the rise of the TNP industry and increasing number of TNP chauffeurs limited taxicab and livery chauffeur earnings opportunities. The City limits the number of cab medallions to 6,999, while there is no limit on TNP or livery vehicles. In stakeholder meetings, taxi chauffeurs and advocates expressed frustration with taxicab companies for what has been viewed as delayed and limited investment in research and development for technology enhancements that would allow taxicabs to compete against TNPs.

Additionally, taxicab advocates acknowledged the high costs of operating as a taxicab chauffeur, specifically including debt challenges related to taxicab medallion ownership. In August 2014, prices ranged from $270,000 to $310,000.[43] In August 2019, Chicago taxi medallions sold for between $25,000 and $50,000[44], representing between an 83.8% decrease for the highest medallion prices in each year. Taxicab chauffeurs state that high operating costs in addition to limited earnings opportunities resulting from TNP competition has forced many taxicab chauffeurs out of the industry.

TNP chauffeurs also report unique concerns related to earnings. Many express frustrations that pay is determined by trip duration (time with passengers), rather than total time logged into the application. Some advocates argue that time waiting for a passenger ride should be compensated. See Section 6e. Multi-Apping and Multiple PPV Services for additional detail.

[42] Manzo, F., and Bruno, R. (2021, January 19). On-Demand Workers, Sub-Minimum Wages. Chicago. Illinois Economic Policy Institute. https://illinoisepi.files.wordpress.com/2021/01/ilepi-pmcr-on-demand-workers-sub-minimum-wages-final.pdf
[43] City of Chicago, Business Affairs and Consumer Protection. *Medallions Transfers 8/22/2007 to Present.* https://data.cityofchicago.org/Transportation/Taxi-Medallion-Transfers/6u8z-aubf
[44] City of Chicago, Business Affairs and Consumer Protection. *Medallions Transfers 8/22/2007 to Present.* https://data.cityofchicago.org/Transportation/Taxi-Medallion-Transfers/6u8z-aubf

When asked to identify the top three factors to improve chauffeur conditions, Public Chauffeur Survey respondents most commonly selected:

- "Increased earnings" (55% of respondents)
- "Knowing a destination before accepting the ride" (40% of respondents)
- "More safety precautions (29% of respondents)

These results can be further broken down by taxicab, TNP, and livery respondents to the survey. Across all three chauffeur types, "increased earnings" was the most common response, selected by more than 50% of survey respondents. Among taxicab chauffeurs, the second most frequent response was "better technology" (25% of taxicab respondents). Among TNP chauffeurs, the second most frequent response was "knowing destination before accepting the ride" (45% of TNP respondents). Among livery chauffeurs, the second most frequent response was "increased benefits (example: paid time off" (35% of livery respondents).

These survey responses indicate that all chauffeurs, irrespective of PPV type, view limited earnings as a core challenge of operating as a public chauffeur in Chicago. These results also indicate that chauffeurs feel unique challenges depending on their PPV industry. Taxi respondents report challenges related to technology limitations, likely related to perceived benefits of the TNP business model which relies on a mobile application. TNPs report challenges related to the lack of control over knowing ride location before agreeing to the ride. Livery respondents report challenges related to benefits (even though most livery chauffeurs are employees, unlike the independent contractor status of most TNP and taxi chauffeurs).

Please see ***Public Chauffeur Survey Results Summary*** provided under separate cover, for the complete results of this survey question.

8. Recommendations

The PPV industry is a significant part of the Chicago economy, serving as a relatively flexible earnings opportunity for chauffeurs and providing passengers with a means of traveling around the region.

A key takeaway from this study is that there is enormous variability among and across chauffeur conditions. As stated elsewhere, the City prioritized for Crowe the goal to understand full-time chauffeur conditions in this study. The City's represented perspective was based on full-time chauffeurs being most likely to rely on providing PPV services as their primary source of income. Based on the City Data Study Period, a small number of chauffeurs drive full-time in some weeks, though they may drive only part-time or not at all in other weeks. The vast majority of chauffeurs in the City Data Study Period drove part-time, or fewer than 30 hours per week with passengers, in all 12 study weeks. Chauffeurs' motivating factors range greatly – some may drive to earn enough to serve as a primary source of income, and others may drive only when convenient for them or when they want to supplement other income sources. Chauffeur earnings also span a wide range, depending on pay models, when and how frequently the chauffeur chooses to drive, how much demand there is for trips while the chauffeur is working, and other factors. Because of this extensive variability, there is not a "normal" profile of a chauffeur in the City of Chicago.

This variability means it is critical for decision makers to consider the disparate stakeholder groups – and variable *individuals* within stakeholder groups – when assessing any policy or administrative change. As with most public policy, there may be intended and unintended impacts associated with a policy change. For example, if the City were to contemplate a policy related to conditions for full-time chauffeurs, the City should understand implications of such a policy on the part-time chauffeurs. In that example, the City should also consult with its legal advisors for appropriate guidance related to part-/full-time industry participation as it relates to employment and contractor status, treatment of expenses, and benefits.

The City should determine if any policy changes are needed related to Chicago's PPV chauffeurs or license holders, and carefully assess whether there may be any unforeseen impacts to some stakeholders as a result of any potential change. Below, we outline three potential actions that the City may wish to consider.

1. Expand Data Collection and Data Quality Processes

The City of Chicago regularly collects PPV industry data and posts these for public viewing on the City's open data portal. As part of its oversight responsibilities and licensing processes, BACP's legal authority includes requiring taxicab medallion and TNP company licensees to report their respective trip activity data to the City. The City data portal also includes livery, charter bus, and pedicab vehicle information within the public passenger vehicles and public chauffeur datasets.

The City may consider expanding data collection related to the PPV industry. For example, at present the City does not collect any shift duration data from taxis (something comparable to TNP session data). This limits the ability to analyze and understand the full picture of taxi earnings for all hours driven as a chauffeur. In addition, the City has limited data on other PPV industry vehicles, such as livery, charter buses, pedi-cabs, and others, which may limit future analysis and program assessments. Further, the Public Chauffeur Survey results suggest that PPV chauffeurs may increasingly be participating in other gig economy work, such as grocery and restaurant delivery services. The lack of data and visibility into the delivery industry may limit the City's ability to develop policies that support and protect gig economy participants.

The City may also consider implementing additional data review standards. Analysis of the City's data for this study revealed inconsistencies and quality issues that Crowe and the City discussed and resolved for purposes of this study. For PPV Study reports, Crowe controlled for data issues using data filters and other data transformation steps as necessary; any data cleansing and manipulation implemented by Crowe was jointly agreed upon with the City. However, these data quality limitations may

hinder additional analysis of PPV industry conditions. Therefore, the City may wish to review what is expected in terms of data quality from industry partners, as well as review and strengthen the city's internal quality assurance and quality control processes.

This recommendation supports the following PPV Program Goals:

- 4. Standardize and modernize requirements and regulations across various types of PPVs.
- 6. Modernize PPV Program processes, technology, and educational opportunities for PPV consumers and drivers.

2. Review and Reassess All Fees Related to Chauffeur Licensing

The City may consider reviewing all licensing and other fees related to public chauffeurs to standardize and promote fairness across chauffeur types. As discussed in Section 4b. Licensing Costs, City fees and taxes are not uniform across the types of chauffeurs and PPV companies. Notably, the taxicab and livery fees and taxes are structured to apply to each vehicle or chauffeur, whereas the TNP fees and taxes are determined at the company (TNP platform) level.

This recommendation supports the following PPV Program Goal:

- 4. Standardize and modernize requirements and regulations across various types of PPVs.

3. Review and Reassess Requirements Related to Chauffeur Licensing

The Chicago City Council may have an opportunity to reevaluate existing requirements for chauffeur licensing as federal, state, and local laws evolve. For example, the City may consider updating the City's five- year lookback period[45] for background checks. This may help the City strike a balance between protecting consumer safety and not worsening existing inequalities within communities of color, as research suggests these populations are disproportionally penalized by these lookback periods. We acknowledge that many of these changes would require City Council action and are not within direct control of BACP or the Mayor's Office. However, we summarize the opportunity here.

In March 2021, the Chicago Department of Family and Support Services and BACP offered the following recommendations to advance this goal[46]:

[45] In 2021, during the course of this study, the City of Chicago passed the ChiBizStrong Initiative Ordinance, which included updating public chauffeur license qualification with a social equity and safety lens.
[46] Recommendations have been lightly edited

- Create an avenue for individualized assessments so that an applicant can address criminal history findings or appeal negative decisions with evidence of mitigating factors that show stability, including completion of employment training programs and certificates of rehabilitation
- Limit the lookback period to three years from release, rather than five years from sentence
- Include age at release as a factor when reviewing applicants with justice involvement in their recent history
- Update policies so that those with felony drug charges are eligible for expungement
- Incorporate the new Illinois cannabis legalization laws
- Co-design a new policy with representatives of the communities most impacted

The City may also consider reviewing its requirements of public chauffeurs to determine if there are any unnecessary cost barriers. For example, the City could consider permanently removing the outstanding City debt assessment. Previously, chauffeur applicants in Chicago could be denied a public chauffeurs license (or a license renewal) in some circumstances due to outstanding City debt. In March of 2020, Mayor Lightfoot suspended debt collection in response to the COVID-19 pandemic, pausing debt collection for public chauffeurs in addition to some other Chicagoans with City debt.[47] The City could consider extending this suspension or permanently ending this program.[48]

This recommendation supports the following PPV Program Goals:

- 4. Standardize and modernize requirements and regulations across various types of PPVs.
- 6. Modernize PPV Program processes, technology, and educational opportunities for PPV consumers and drivers.

As written above, the extensive variability among and across public chauffeurs in Chicago should be a key consideration as the City determines whether any policy or administrative changes are needed.

Crowe again thanks the City of Chicago and all stakeholders who participated in this project by providing industry data and insights.

[47] "Mayor Lightfoot Announces Temporary Suspension of Debt Collection, Ticketing and Towing Practices to Provide Relief in Response to The Covid-19" March 18, 2020, Outbreakhttps://www.chicago.gov/city/en/depts/mayor/press_room/press_releases/2020/march/SuspensionTicketingDebtCollection.html.

[48] As of January 2023, the City now offers multiple debt relief programs. See the City's "New Start Chicago" summary of programs available at https://www.chicago.gov/city/en/sites/newstartchicago/home.html.

City of Chicago

Department of Business Affairs and Consumer Protection (BACP)

Public Passenger Vehicle (PPV) Study

Effects on Passengers & the Chicago Economy

January 31, 2023

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1. Executive Summary

The City of Chicago (City) Department of Business Affairs and Consumer Protection (BACP) initiated the City's Public Passenger Vehicle (PPV) Study in 2020. After a competitive procurement process, the City secured the services of Crowe LLP (Crowe) in October 2020 to prepare the study. The purpose of the PPV Study was to evaluate the state of the public passenger vehicle industry in the City of Chicago. The primary goal was to provide the City with analysis of conditions, based on available data. Based on analysis, this report also identified potential policy options and action steps for the City to consider in meeting transportation and economic goals.

This ***Effects on Passengers & the Chicago Economy*** report was the second and final report developed for the PPV Study. This report included analysis and discussion of the following:

PPV Service Prices

PPV Service Availability

PPV Service Response Times

Accessibility for Passengers with Disabilities

Passenger Safety

Passenger Demographics

Passenger Complaints

Consumer Demand for Mobility and Transportation Options

Labor Market Considerations

PPV Revenues to the City

The PPV industry is a significant part of the Chicago economy. By providing point-to-point, relatively on-demand transportation options for Chicago residents, workers, and visitors, PPVs represent an important source of consumer transportation choices. PPVs also provide a relatively flexible earnings opportunity for chauffeurs and are a revenue source for City operations. All of these factors make PPVs an important contributor to the Chicago economy.

This study explored differences in PPV affordability and accessibility, including differences by geography, across different areas of Chicago. Access and service response time vary by Chicago community area. The median service response time for the 10 most underserved community areas ranged 3 – 7 minutes, compared to a response time of 2 minutes in several of the most served community areas.

Within the City Data Study Period weeks, the average cost of a TNP trip ranged between $8.53 to $15.57, or the equivalent of 39-72 minutes of minimum wage work (which was $13.00/hour between 7/1/2019 and 6/30/2020)0F1 for a passenger. During this same period, the average cost of a taxicab trip ranged between $12.30 to $16.54, or the equivalent of 57-76 minutes of minimum wage work for a passenger.

TNP fares increased 2.8% in September 2020 (during COVID-19) compared to September 2019 (before COVID-19). This TNP fare increase is despite reductions in travel time (-18.3%) and trip miles (-5.2%). In addition to fares increasing, there was a 39.2% reduction in tips from passengers to chauffeurs.

The study also explored PPV passenger demographics and influences on passenger PPV and broader transportation choices, including concerns related to safety, and PPV accessibility, finding that persons with disabilities take twice the number of for-hire trips (using taxicabs and TNPs) per year as persons without disabilities, according to a study by the San Francisco Municipal Transportation Agency.[2]

Based on 2019 City of Chicago 311 calls related to PPV data, the vast majority of 311 calls related to both taxi and TNP rides contained negative reports (complaints), with the most common concerns related to poor service or driving.

This study also explored possible PPV industry impacts on the Chicago economy, including the industry's role as an earnings opportunity for many Chicagoans and/or a mode of transportation to take Chicagoans to and from work, and ways in which PPV options can fill gaps in the transit network. In January 2019, there were over 65,000 active* TNP chauffeurs and over 5,100 active* taxi chauffeurs. The exact number of active livery chauffeurs was unknown.

The COVID-19 pandemic and resulting economic recession beginning in early Spring 2020 severely impacted passengers and chauffeurs, with a substantial downward shift in the number of active taxi and TNP chauffeurs and trips. In April 2020 (during the pandemic), there were approximately 15,000 active* TNP chauffeurs (a decrease from over 65,000 before the pandemic, as noted in the previous paragraph). Active* taxi chauffeurs also decreased to approximately 700 in April 2020 (during the pandemic), down from 5,100 before the pandemic.

Based on the results of the City's Public Chauffeur Survey, the COVID-19 pandemic resulted in a reported increase in the percentage of chauffeurs who also reported driving for restaurant and grocery delivery services. In 2019 before the COVID-19 pandemic, 8% of Public Chauffeur Survey respondents reported working as a restaurant delivery driver as compared to 17% who worked as a restaurant delivery driver during COVID-19. In addition, before COVID-19, 3% of survey respondents reported working as a grocery store delivery driver, as compared to 8% who utilized this earnings opportunity during the COVID-19 pandemic.

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[1] The Chicago Minimum Wage Ordinance (2014). Municipal Code of Chicago, Chapters 1 – 24.
[2] Coren, C., & Lowe, K. (2020, July 21). *Commuting in Context: A Qualitative Study of Transportation Challenges for Disadvantaged Job Seekers in Chicago, IL.* University of Illinois at Chicago.
* For these purposes, an "active" chauffeur is defined as one who provided four or more trips per month.

An analysis of changes in the Chicago-Naperville-Arlington Heights unemployment rate before COVID (2.8% in December 2019[3]) as compared to during COVID (17.6% in April 2020[4]) found that the Chicago unemployment rate *increased* and the number of active chauffeurs *decreased* over roughly the same period, suggesting that notable numbers of unemployed or underemployed Chicagoans did not pursue PPV chauffeur earnings opportunities as a substitute for other lost wages.

Finally, the COVID-19 pandemic resulted in a decrease of PPV revenues to the City. For example, between 2019 and 2020, the Ground Transportation Tax (GTT) revenues generated by the TNP industry decreased 29.79% and GTT revenues generated by the taxi industry decreased by 51.9%.

Recommendations

At the same time, the variability within the PPV industry means it is critical for decision makers to consider the disparate stakeholder groups – and variable *individuals* within stakeholder groups – when considering any policy or administrative change. As discussed in a separate report (*Chauffeur Conditions and Effects on License Holders*), chauffeurs drive myriad different hours and have a wide range of earnings. Similarly, this report summarizes that passengers have infinite individual preferences, accessibility requirements, and resources. As with most public policy, there may be intended and unintended impacts associated with a policy change.

The City should determine if any policy changes are needed related to Chicago passengers or economic conditions, and carefully assess whether there may be unforeseen impacts to some stakeholders as a result of any potential change. Implementation of any policies or incentives to promote affordability will also require the City to first analyze the estimated budgetary, staffing, and other implications of such a program against other City transportation and economic priorities.

Below, we outline three potential actions the City may wish to consider.

1. Expand Data Collection and Implement an Annual Passenger Survey

The City may consider collecting additional PPV data to better understand PPV conditions for passengers. Specifically, the City may consider 1) requiring routine submission of service response data by start and end location by TNPs and taxis that use dispatch apps, and 2) livery chauffeur and trip data (including fares).

The City may also consider facilitating a brief annual passenger survey to better understand passenger needs and experiences. Survey questions may cover topics such as service availability, affordability, and accessibility; factors influencing passengers' transportation decisions; and passenger experiences with PPVs and chauffeurs. An annual survey would provide the City with insight into whether passengers' needs are being met – as well as historical trend information – so the City can consider program or policy changes to continue to protect Chicago consumers/passengers. We note that the Chicago Transit Authority and other regional transit systems frequently conduct passenger surveys; the City may wish to align a potential PPV passenger survey with the City's public transit survey.

[3] Cisco, R., & Niederhofer, V. (2020, January 30). *Unemployment Rate Down in All Fourteen Metro Areas, Jobs Up in Ten.* Illinois Department of Employment Security Press Release. https://www2.illinois.gov/IISNews/2110421104-IDES_December_Unemployment_Rate_Region_6.pdf.
[4] Cisco, R., & Salustro, S. (2020, May 29). *Unemployment Rates Rise in all Metro Areas as COVID-19 Impacts Entire State.* Illinois Department of Employment Security Press Release. https://www2.illinois.gov/IISNews/21604-IDES_April_Unemployment_Region_2.pdf.

2. Incentivize Cost-Efficiency to Promote Affordability for Passengers

During the 12-week City Data Study Period, the average cost of a taxicab trip ranged from $12.30 to $16.54, or the equivalent of 57-76 minutes of minimum wage work ($13.00[5]) for a passenger. The average cost of a TNP trip ranged from $8.53 to $15.57, or the equivalent of 39-72 minutes of minimum wage work.

This means a minimum wage earner can spend anywhere from almost 66% to more than 100% of an hour's wages for an average TNP or taxicab trip. For these passengers, it may be difficult to afford TNP or taxi rides, and passengers may need to opt for less expensive, and less convenient or efficient, ways of traveling.

The City may consider policies and incentives to promote affordability, particularly for lower income passengers. To help with affordability, the City may consider ways to subsidize PPV fares, such as vouchers for passengers in lower income neighborhoods or areas less served by public transportation. Vouchers may be designed to discount TNP and/or taxi fares or may be designed to provide free or discounted travel between a passenger's home, work, or other location to the nearest public transit station.

We note that Uber, Lyft, taxi dispatch platforms, and several cities have created partnerships to help connect passengers to public transit. Many rideshare apps today embed public transit information for passengers to consider when planning their trips – including in Chicago. The City may wish to consider additional financial incentives to expand on these partnerships with a focus on equity and affordability.

3. Incentivize Chauffeurs to Operate in Underserved Areas to Promote Equitable Passenger Access

As discussed throughout this report, not all neighborhoods and passengers in the City of Chicago appear to have equitable access to PPVs. We have seen, for example, that the majority of TNP and taxicab trips occur on the north and northwest sides of the City. In addition, for the top ten underserved[6] community areas, median service response times ranged between 3 and 7 minutes; whereas in nine of the top ten most served[7] community areas, the median response time was only 2 minutes.

The City has various legislation and incentives to encourage chauffeurs to provide services for passengers that require wheelchair access. In addition, the City taxes TNP rides in a way that incentivizes fewer private (individual rider) TNP trips downtown during peak hours, with a lower tax rate for shared trips (multiple passengers) in other parts of the city.

The City may wish to consider additional financial incentives for taxicab and TNP chauffeurs that operate in underserved community areas. Similar to potential subsidies to offset passenger costs, it may be helpful to consider incentives for chauffeur companies and individual chauffeurs who are available to pick up passengers in underserved areas. Because TNP and taxi chauffeurs earn money based on passenger trips provided, they are most likely to seek passengers in community areas with high demand for trips. Subsidies for lower income passengers (see Recommendation 2) may help spur demand by reducing passenger costs, but lower income passengers will only be able to take (and pay for) TNP and taxi rides if chauffeurs are locally available and have reliable response times. Therefore, the City may consider

[5] The Chicago Minimum Wage Ordinance (2014). Municipal Code of Chicago, Chapters 1 – 24. Chicago's minimum wage was $13.00/hour between 7/1/2019 and 6/30/2020, with provisions for annual increases.
[6] Per the Public Passenger Vehicles Underserved Task Force, "underserved" community areas are those least often serviced by PPVs in Chicago.
[7] Per the Public Passenger Vehicles Underserved Task Force, "served" community areas are those most frequently serviced by PPVs in Chicago.

incentives to encourage chauffeurs to operate in areas with unmet demand. Any such policy should be consistent with other ongoing transportation and equity related initiatives in the city, such as the *Equitable Transit-Oriented Development Policy Plan*, INVEST South/West Initiative, and guidance from the City's Office of Equity and Racial Justice.

Note

Because these services did not constitute an audit, review, or examination in accordance with standards established by the American Institute of Certified Public Accountants, we are not expressing an opinion on the underlying data provided to support our analysis. Data provided for our analysis was provided by the City of Chicago and was obtained by the City from various sources. We performed analysis on the data provided as described in our report. We have no obligation to perform any services beyond those described in our report. If we were to perform additional services, other matters might come to our attention that may affect our analysis and related conclusions. We make no representations as to the adequacy of these services for the City's purposes.

Our services and work product are intended for the benefit and use of the City of Chicago. This engagement was not planned or conducted in contemplation of reliance by any other party and is not intended to benefit or influence any other party. Therefore, items of possible interest to a third party may not be specifically addressed or matters may exist that could be assessed differently by a third party.

Crowe thanks the City of Chicago and all stakeholders who participated in this project by providing their data and insights.

2. Introduction

The City of Chicago (City) Department of Business Affairs and Consumer Protection (BACP) initiated the City's Public Passenger Vehicle (PPV) Study in 2020. After a competitive procurement process, the City secured the services of Crowe LLP (Crowe) in October 2020 to prepare the study. The purpose of the PPV Study was to evaluate the state of key aspects of the public passenger vehicle industry in the City of Chicago. The primary goal of this assessment was to provide the city with data-driven analysis of conditions, based on available data. Based on analysis, this report also identified potential policy options and action steps for the City to consider in meeting transportation and economic goals.

In the first phase of the PPV Study in 2021, Crowe developed the *Chauffeur Conditions and Effects on License Holders* report. The *Chauffeur Conditions and Effects on License Holders* report examined chauffeur earnings, motivations, and concerns regarding operating as a chauffeur, business practices related to PPV licensing and regulation, and other chauffeur conditions.

This ***Effects on Passengers and Chicago Economy*** report is the second and final report developed for the PPV Study. This report examines the relationship between the PPV industry and passengers and the Chicago economy.

3. Definitions

Crowe recognizes that various entities may refer to certain PPV industry terms differently. This report utilizes the following definitions:

- **License holders** are companies or individuals that secure and obtain City of Chicago licenses to operate and manage the business and vehicles performing chauffeur driven transportation for hire for passengers. License holders include taxi medallion license holders, TNP companies (Uber, Lyft, and Via), and livery companies.

- **Liveries,** including limousines and town cars, are licensed public passenger vehicles that charge a fare which is not based on a meter. Livery rides and fares must be prearranged. Livery rides may not be street hailed or secured in cab stands. Liveries are most used by business travelers; but, also for special events, such as weddings and proms. The Chicago livery companies, at their discretion, engage livery chauffeurs as employees or independent contractors. Refer to Chapter 9-114 of the Municipal Code of Chicago (MCC) for Chicago livery laws.

- **Passengers**, for purposes of this report, refer to consumers of Chicago transportation options, including PPVs. Passengers include residents and non-residents of the City.

- **Public Chauffeurs** are individuals licensed to operate a public passenger vehicle (PPV) in the City of Chicago. Public chauffeurs include those individuals who operate taxicabs, TNPs, livery, pedicab, and charter and sight-seeing buses. The scope of this assessment was limited to taxicab, TNP, and livery drivers.

- A **Public Chauffeur's License** is a license issued pursuant to Chapter 9-104 of the Municipal Code of Chicago (MCC). Pursuant to Chapter 9-104 of the MCC, BACP issues a taxi chauffeur license to qualified individuals to operate taxicabs and a livery chauffeur license to qualified individuals to operate livery vehicles in the City of Chicago. Chauffeur minimum qualifications are detailed in Chapter 9-104 MCC. A taxi chauffeur licensee may operate a taxicab, livery, or a TNP vehicle. A livery chauffeur licensee may operate a livery or TNP vehicle but not a taxicab.

- **Public Passenger Vehicles (PPVs)** are for-hire vehicles including taxicabs, TNPs, liveries, pedicabs, charter and sight-seeing buses, private ambulances, water taxis and tour boats. The scope of this assessment was limited to taxicabs, TNPs, and liveries.

- **Session Data**, as used in this report, refers to data submitted by PPV industry stakeholders to the City of Chicago as required. This dataset is the "record of each TNP driver session on the licensee's Internet-enabled application or digital platform. For purposes of this study, a driver's session begins when a licensee's driver activates a mode in the licensee's Internet-enabled application or digital platform, signaling the driver's readiness to receive and respond to trip requests. For purposes of this study, a driver's session ends when the driver deactivates the mode and is no longer able to receive and respond to TNP requests. All sessions completed during the reporting period must be reported in this file. Sessions in progress at the end of the reporting period should be held for the next report."

- **Taxicabs** are defined as a vehicle licensed for hire at fare rates set by the City and recorded by a taximeter. A taxi may be hailed by customers on the street or prearranged via phone call to the taxicab company or through a taxicab dispatch app, such as Curb or Arro. Historically, taxicab use has primarily been through real-time hailing by customers on the street. Taxis are driven by licensed taxi chauffeurs. A medallion is a metal plate affixed to the hood of the taxicab vehicle indicating the vehicle is a licensed City of Chicago taxicab. Please refer to Chapter 9-112 of the Municipal Code of Chicago (MCC) for Chicago taxicab industry laws.

- **Transportation Network Providers** (TNPs) provide and maintain a digital platform (smart phone application or app) to connect passengers with chauffeurs and vehicles for compensation. TNPs are commonly referred to as "rideshare" or "ride hail" companies and, in some jurisdictions, as Transportation Network Companies (TNCs). The TNPs operating in the City during this report's timeframe were Uber, Lyft, and Via. Refer to Chapter 9-115 of the Municipal Code of Chicago (MCC) for Chicago TNP industry laws.

- A **TNP Chauffeur's License** is a license issued pursuant to Chapter 9-115 of the Municipal Code of Chicago (MCC). Pursuant to Chapter 9-115 of the MCC, BACP issues a TNP chauffeur license to qualified individuals to operate TNP vehicles in the City of Chicago. TNP chauffeur qualifications are detailed in Chapter 9-115 MCC. A TNP chauffeur licensee may operate a TNP vehicle, but not a taxicab or livery. Chicago TNP chauffeurs and vehicles must be affiliated with a licensed TNP company and available only through affiliated TNP company's platform. A TNP chauffeur and vehicle may be affiliated with multiple TNP companies. TNP chauffeurs operate as independent contractors on affiliated TNP company platforms.

- **Trip Data**, as used in this report, refers to data submitted by PPV industry stakeholders to the City of Chicago as required. This dataset is the "record of each trip which shows where a passenger is picked up and dropped off. Must include all Trips completed during the reporting period. Trips in progress at the end of the reporting period should be held for the next report. For the purposes of this file, a trip is a transaction with a specific customer, including any additional people transported under the same transaction. A transaction with a different customer, even if present in the vehicle at the same time, is a separate trip."

4. PPV Program Overview

BACP is the municipal department charged with licensing and regulating businesses operating in the City of Chicago. BACP has the dual role of promoting businesses and protecting consumers to ensure a fair and vibrant marketplace in the City of Chicago. BACP's Public Vehicle Licensing Bureau is primarily responsible for ensuring public vehicles are safe, reliable and provide residents and visitors positive transportation options. The Public Vehicle Licensing Bureau licenses and regulates Chicago's public chauffeurs and public passenger vehicle license holders. These include but are not limited to taxis, liveries, and transportation network providers (TNPs), also commonly referred to as ride-hail or ride-share. As of March 2022, the City had approximately 2,151 active* taxi chauffeurs and 37,084 active* TNP chauffeurs.[8]

A license is required for each public passenger vehicle and chauffeur operating in the City of Chicago. Individuals who drive taxis, livery, and TNP vehicles are required to obtain a public chauffeur's license issued by BACP:

- Taxis must be driven by a BACP licensed taxi chauffeur.
- Livery vehicles must be driven by a BACP licensed taxi or livery chauffeur.
- TNP vehicles (driven by chauffeurs using Uber, Lyft, or Via platforms) must be driven by a BACP licensed TNP chauffeur. A TNP company secures TNP chauffeur licenses for its affiliated drivers.[9]

In addition, BACP licenses and regulates other public passenger vehicle types: charter-sightseeing buses, pedicabs, medicars, private ambulances, tour boats, and water taxis – any vehicle which is chauffeur or captain operated for the transport of people. This study did not include analysis of these other PPVs.

4a. Related City Initiatives

Several ongoing initiatives – including the City's *Equitable Transit-Oriented Development (ETOD) Policy Plan*, INVEST South/West Initiative and CMAP's ON TO 2050 – aim to improve transportation and transportation equity across the City. This section briefly summarizes these for context around ongoing policy and program initiatives.

The ETOD Policy Plan was published in August 2021 through an 18-month outreach process with over 70 neighborhood, citywide and regional stakeholders. The Mayor's Office partnered with the Departments of Planning and Development, Housing, Transportation, Public Health and the Chicago Transit Authority in developing the plan, along with support from Elevated Chicago and its members and partners. The Plan proposes a roadmap for City actions over the next three years to advance "racial equity, community wealth building, climate resilience and public health goals through equitable Transit-Oriented Development (ETOD)," with a focus on expanding investment and access to the Chicago transportation system in Chicago's most disinvested neighborhoods.[10]

INVEST South/West allocates resources to revitalize 10 historic neighborhoods on Chicago's South and West sides. The City is partnering with community organizations and corporate/philanthropic partners to distribute over $750 million dollars in total, some of which will be allocated for transportation related initiatives. Over the next three years funds will be distributed toward the following neighborhoods: Auburn Gresham, Austin, Bronzeville, Greater Englewood, New City, North Lawndale, Humboldt Park, Greater

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[8] City of Chicago's internal *Public Chauffeurs Dashboard* using industry data as of March 2022.
[9] A taxi chauffeur licensee is permitted to operate a taxi, livery, or TNP vehicle. A livery chauffeur licensee may operate a livery or TNP vehicle. A TNP chauffeur licensee may only operate a TNP vehicle.
* For these purposes, an "active" chauffeur is defined as one who provided four or more trips per month.
[10] The City of Chicago. (2021, June 15). "Equitable Transit-Oriented Development (ETOD) Policy Plan. Chicago. https://www.chicago.gov/content/dam/city/sites/etod/Pdfs/ETOD-Full-Policy-Plan-with-Appendices-6-15-21.pdf.

Roseland, South Chicago, and South Shore. The City selected these neighborhoods due to their potential as current and future focal points for pedestrian activity, shopping, transportation, public spaces, and other quality-of-life amenities for local residents.[11]

The Chicago Metropolitan Agency for Planning (CMAP) is also creating a transportation plan as part of its ON TO 2050 initiative. CMAP aims to leverage Chicago's transportation network to promote inclusive growth and create a "well-integrated, multimodal transportation system for seamless movement of people and goods within and through the seven counties of metropolitan Chicago."[12] CMAP identified the following recommendations for Economically Disconnected Areas (EDA) and disinvested areas in Chicago:

- Invest in disinvested areas
- Prioritize pathways for upward economic mobility
- Reduce flood risk to people and assets
- Use collaborative leadership to address regional challenges

4b. Chicago Consumer Protection Overview

Chicago's Department of Business Affairs and Consumer Protection (BACP) is tasked with ensuring a fair marketplace for businesses and consumers. Among other activities, BACP licenses businesses and public vehicles,[13] provides business education and access to resources, enforces the Municipal Code, and protects consumers from fraud.

BACP is the primary government agency within the City of Chicago focused on consumer protection, including safeguarding Chicagoans against acts of consumer fraud, unfair methods of competition, and deceptive practices. This includes conduct that violates the Municipal Code sections related to business operations or consumer protection, as well as unlawful practices under the Illinois Consumer Fraud and Deceptive Business Practices Act.[14]

Along with licenses and regulations for Chicago's public chauffeurs and public passenger vehicles, BACP provides consumer information and enables consumers to report concerns. Passengers can report any positive or negative feedback regarding PPVs to the City's 311 non-emergency call center via phone call or online. Passengers may also direct questions regarding licensing and regulations to BACPPV@cityofchicago.org. BACP also provides passengers with updated information about PPV ridership on the *Ride Smart Chicago* section of BACP's website.

[11] Chicago.gov. *INVEST South/West*. https://www.chicago.gov/city/en/sites/invest_sw/home.html.
[12] Chicago Metropolitan Agency for Planning. (2018). *On to 2050*. CMAP. https://www.cmap.illinois.gov/2050/mobility.
[13] The ***Chauffeur Conditions and Effects on License Holders*** report discusses in detail BACP's role in licensing and regulating Chicago's public chauffeurs and public passenger vehicles (PPVs), including but not limited to taxicabs, liveries, and TNPs.
[14] *Business Affairs and Consumer Protection.* City of Chicago: Business Affairs and Consumer Protection, https://www.chicago.gov/city/en/depts/bacp.html

5. PPV Study Inputs

The PPV Study uses data and other inputs from several sources. This section provides an overview of each input to the PPV Study.

5a. Stakeholder Engagement

During the initial phases of the PPV Study, BACP sought community and stakeholder feedback on proposed research questions and industry challenges. External stakeholders were also given opportunities to provide feedback on the City's draft Public Chauffeur Survey, and their feedback informed substantial revisions to the survey prior to its publication. The Public Chauffeur Survey received over 7,000 responses and is a source of information about chauffeur perceptions, concerns, and motivations for context around this study.

Between October and December 2020, the City and Crowe provided opportunities for the following stakeholder groups to share their perspectives in advance of the PPV Study and/or to provide an opportunity for feedback on the draft Public Chauffeur Survey:

- **TNP Chauffeurs**: Chicago Rideshare Advocates and The People's Lobby: Chicago Gig Alliance
- **Taxi Chauffeurs**: American Federation of State, County & Municipal Employees (AFSCME)[15]
- **TNP Companies**: Uber, Lyft, and Via
- **Taxicab Medallion License Holders and Affiliations**
- **Livery License Holders and Chauffeurs**: Illinois Limousine & Bus Association (ILLBA)

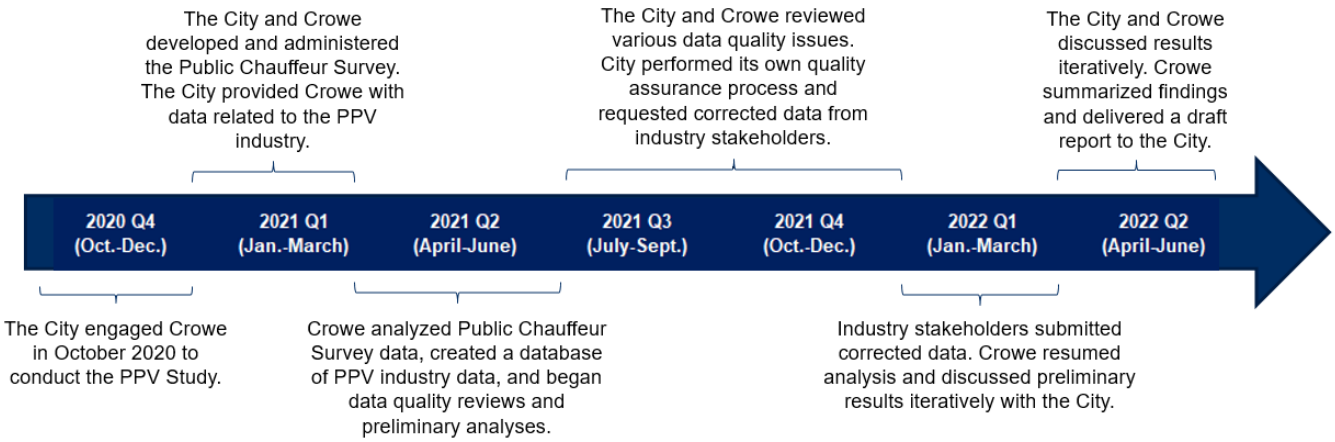
BACP also facilitated a stakeholder session in September 2021 to review key aspects of the planned earnings methodology and provide an update on the PPV Study. Stakeholders from taxicab and TNP driver advocacy organizations, taxi industry representatives, and TNP companies attended, as well as representatives from the City of Chicago Mayor's Office, BACP, and Crowe. During that stakeholder session and in follow-up communications to BACP, some stakeholders provided feedback and suggestions. The study considered this feedback when finalizing the study approach.

In addition to the outreach specific to this PPV Study, BACP regularly engages with stakeholders across the TNP, taxicab, and livery industries to understand their needs.

[15] As of the time of this Report, the United Taxidrivers Community Council (UTCC) had not participated in the City and Crowe's scheduled taxicab driver stakeholder meeting.

5b. Data Collection

BACP collected and provided all economic and industry data for licenses, passenger rates, resident transportation priorities and other information related to the PPV program for the PPV Study. Crowe relied on several data gathering tools and techniques to develop a holistic picture of the PPV industry and chauffeur conditions in Chicago. The image below provides a timeline of key study activities.



City of Chicago Industry Data

The City of Chicago regularly collects data related to the PPV industry and posts non-personally identifiable information (non-PII) aggregated data for public viewing on the City's open data portal (data.cityofchicago.org). As part of its oversight responsibilities and licensing processes, BACP's legal authority includes requiring taxicab medallion and TNP company licensees to report their respective trip activity data to the City. The City data portal also includes licensing information for taxicabs, liveries, and public chauffeurs within public passenger vehicles and public chauffeur datasets.

Reporting requirements for TNPs are outlined in the City's TNP Reporting Manual, as set forth in Chapter 9-115 of the Municipal Code of Chicago and Section II of the Transportation Network Providers Rules issued by BACP. The City requires TNPs to submit five datasets monthly: (1) Trips, (2) Drivers, (3) sessions, (4) Vehicles, and (5) Compensation (effective August 1, 2020). TNPs may also receive separate and additional requests for data related to trip requests, locations, or communications. Similarly, BACP is authorized to collect select information on taxic chauffeurs, vehicles, and rides.

The City of Chicago data portal publishes some of this reported information, including public passenger vehicle and chauffeur datasets, taxicab trip datasets, and TNP vehicle, chauffeur, and trip datasets. In 2019, the City was the first city in the United States to publicly publish standalone ride-hail industry data on its open data portal.[16] The City applies deidentification and aggregation techniques to protect privacy prior to publicly publishing trip and chauffeur data.

Note that most PPV industry data collected by the City is related to chauffeurs, license holders, vehicles, and trips. **To protect consumer privacy, the City does not collect data on PPV passengers. As such, this report's analysis of passenger conditions leverages results from external industry research, as discussed below.**

The City also provided Crowe with aggregate data via internal City dashboards leveraging a data visualization platform. These dashboards provide internal City views of the same datasets publicly

[16] Mayor's Press Office, City of Chicago. "Mayor Emanuel Opens the Books on Transportation Network Provider Data, Publishes Numbers on Data Portal While Maintaining Personal Privacy." April 12, 2019. https://www.chicago.gov/city/en/depts/mayor/press_room/press_releases/2019/april/TransportationNetworkProviderData.html

available on the City data portal. This report includes visualizations from the City's internal dashboards, such as certain geographic and demographic information related to taxicab and TNP trips.

Supplemental TNP Data Request

In March 2021, BACP issued a subpoena for additional data and information to the licensed TNP companies for 12 non-consecutive one-week periods over 2018 – 2020 for this study. Rule TNP2.03(c) issued by BACP provides that the City may request additional or supplemental data sets from TNPs.

The following 12 non-consecutive weeks were chosen to provide a representative data sample from every quarter of each year within the study period. This report will refer to this as the **City Data Study Period**. See Figure 1.

Figure 1: PPV City Data Study Period

Week	Week Beginning	Week Ending
1	12/31/2017	1/6/2018
2	4/1/2018	4/7/2018
3	7/1/2018	7/7/2018
4	10/1/2018	10/7/2018
5	12/31/2018	1/6/2019
6	4/1/2019	4/7/2019
7	7/1/2019	7/7/2019
8	10/1/2019	10/7/2019
9	12/31/2019	1/6/2020
10	4/1/2020	4/7/2020
11	7/1/2020	7/7/2020
12	10/1/2020	10/7/2020

For the 12 one-week periods, BACP requested that TNPs provide the data elements outlined in the TNP Reporting Manual. In addition, BACP's March subpoena requested that the TNPs provide a written description of how chauffeur earnings are calculated, including chauffeur earnings structure, variables, and formulas. The City followed up with TNP companies between March 2021 and March 2022 to clarify questions related to original data provided as part of the March subpoena. At the City's request, TNP companies submitted corrected data for the PPV Study in December 2021 and January 2022.
BACP provided the 12-week datasets to Crowe securely for confidential use in the PPV Study. Crowe performed data quality assurance reviews and created a database with the data provided.

City of Chicago 311 (Non-Emergency Call Center) Data

The City of Chicago has a 311 non-emergency hotline to field Chicagoans' questions and concerns with issues related to the City. Passengers can report positive or negative feedback regarding PPVs to the City by calling 311 or online at Chicago.gov/311. For this report, Crowe reviewed 311 data related to TNP, taxicab, and other public vehicles for the year 2019. See Section 6h. Passenger Complaints for discussion.

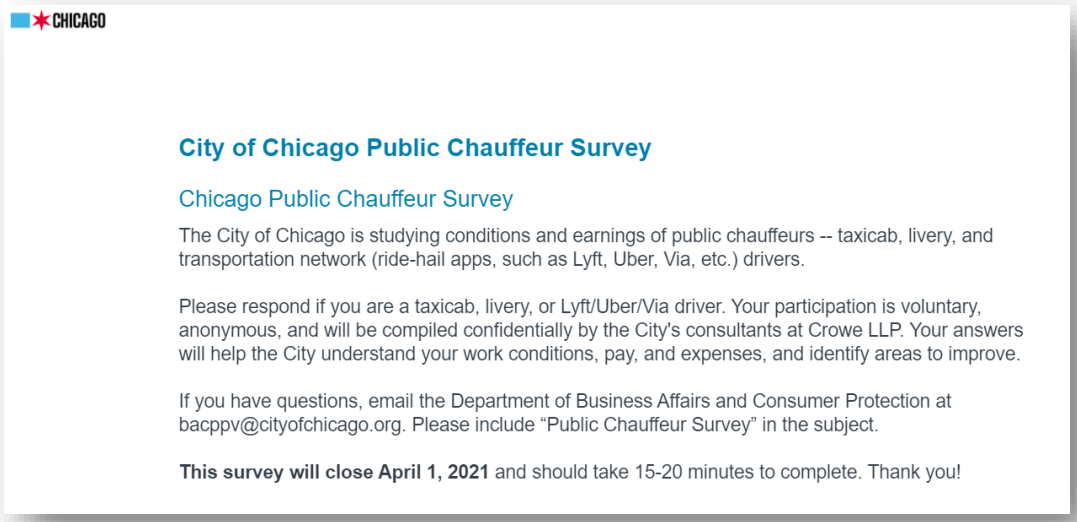
Public Chauffeur Survey

As part of the PPV Study, the City and Crowe developed and administered an anonymous online survey that was distributed to Chicago licensed taxi, livery, and TNP chauffeurs licensed/active as of March 2021. The goal of the Public Chauffeur Survey was to gather first-hand accounts, data, and input from PPV chauffeurs on existing conditions.

The City provided stakeholder representatives, including TNP and taxi chauffeurs, an opportunity to deliver feedback on the first draft of the Public Chauffeur Survey, and the City and Crowe incorporated stakeholder feedback before finalizing the survey structure and specific questions. The final Public Chauffeur Survey contained 50 questions and covered topics including chauffeur demographic information, estimated take-home earnings and expenses, preferred times to operate as a chauffeur, PPV industry concerns, and other comments. The Public Chauffeur Survey was open for responses for over three weeks (March 10 – April 1, 2021).

BACP posted the survey link publicly on March 9 and conducted a robust direct-email campaign. In addition to outreach efforts across all BACP social media platforms, BACP contacted chauffeur advocacy groups, taxicab companies, TNP companies, all 50 aldermanic ward offices, and Neighborhood Business Development Centers to promote the survey.

Over 7,000 survey responses were submitted before the April 1 deadline. The PPV Study used survey results to answer certain questions of interest to the City where PPV industry data were not available. See ***Public Chauffer Survey Key Results Appendices,*** provided under separate cover.


CHICAGO

City of Chicago Public Chauffeur Survey

Chicago Public Chauffeur Survey

The City of Chicago is studying conditions and earnings of public chauffeurs -- taxicab, livery, and transportation network (ride-hail apps, such as Lyft, Uber, Via, etc.) drivers.

Please respond if you are a taxicab, livery, or Lyft/Uber/Via driver. Your participation is voluntary, anonymous, and will be compiled confidentially by the City's consultants at Crowe LLP. Your answers will help the City understand your work conditions, pay, and expenses, and identify areas to improve.

If you have questions, email the Department of Business Affairs and Consumer Protection at bacppv@cityofchicago.org. Please include "Public Chauffeur Survey" in the subject.

This survey will close April 1, 2021 and should take 15-20 minutes to complete. Thank you!

Industry Research

Crowe incorporated results from other industry research in this assessment of PPV industry effects on passengers and the local economy. This research included multiple university studies, survey research, and other peer PPV studies as applicable. Some of the research summarized herein focused on Chicago, while other reports analyzed data and trends across various cities in the United States. Because the City of Chicago does not collect passenger data in order to protect consumer privacy, external research was important to understand the effects of the PPV industry on passengers.

Data Quality Assurance and Security

To validate the integrity of data, the City and Crowe performed a series of data validation activities with all datasets utilized in the PPV Study. Before providing TNP and taxi datasets to Crowe, the City performed its own data quality assurance testing, per City policy for all datasets published on the open data portal. In addition, the City and Crowe validated the expected number of records for any datasets transmitted securely between the parties. Crowe additionally reviewed data for inconsistencies, outliers, and other anomalies. Analysts performed a series of data quality tests to verify that data was appropriately linked, and to confirm that data reflects appropriate field data type, field length, and other parameters to identify null or incorrect values. All data was transmitted securely via a secure file transfer protocol (SFTP) site and is held confidentially and securely per the City's contract with Crowe.

6. Effects of PPV Industry on Chicago Passengers

6a. PPV Service Prices

The following section details findings related to PPV service prices in the City of Chicago. This section includes the following key findings:

- Between January 2018 and December 2020, the average cost of a taxicab trip ranged between $12.30 to $16.54.
- Between January 2018 and December 2020, the average cost of a TNP trip ranged between $8.53 to $15.57.
- TNP fares increased 2.8% in September 2020 (during COVID-19) compared to September 2019 (before COVID-19).

Fares

TNPs and liveries establish their own passenger fares, and these are permitted to fluctuate based on market conditions and company decisions. Typically, TNP and livery fares are based on trip distance, duration, and market demand. Taxicab meter fares are set by the City and have not changed since 2016. Taxicab trips which are street hailed or from cab stands must apply the taxicab meter fare rates established by the City. However, taxicab trips secured through an app may deviate from the established taxicab meter rate (see MCC section 9-114-265). Passengers may choose to accept or reject fare quotes offered through an app. All public chauffeurs, including TNP, taxicab, and livery chauffeurs, may receive gratuity.

TNPs commonly use dynamic pricing (sometimes called surge pricing), in which TNPs set fares to incentivize drivers during high demand periods to attempt to balance the supply (number of active chauffeurs) and demand (number of requested trips). Some critics of dynamic pricing argue that these are predatory charges, in which companies overcharge passengers during periods of high need, such as rush hour or after events. Pursuant to City law, a TNP quote/estimate must be in U.S. dollars and the passenger may not be charged more than 20% of the initial quoted/estimated fare. (See MCC 9-114-265).

Livery companies typically establish fares on a per-day or per-hour basis.

Chicago taxicab meter fares are set by the City, and taxicabs may also incorporate dynamic pricing models as described on the next page of this report. Chicago taxicabs are required to have meters, traditional or smart, to calculate time and distance of the trip to determine the fare at the end of the trip. Traditional taxi meters measure the cost of a ride by measuring the revolutions of the cab's wheel. Digital meters, also known as "smart" meters, are similar to those used by app based TNP services. A tablet can be mounted in the taxicab so a passenger is able to view the progress of the trip and the fare like a traditional meter but will also show a map of the route utilizing GPS technology and estimated time of arrival.

During the study period, the taxicab meter rate was a $3.25 base fare, with each additional mile charged at $2.25. Every 36 seconds of time elapsed added $0.25, and there were charges of $1.00 for the first additional passenger and $0.50 for each additional passenger after the first. For electronic payments, there was a convenience fee of $0.50. Passengers picked up at an airport are assessed a State of Illinois airport departure tax of $4.00 per trip.[17]

Even though dynamic pricing is usually associated with TNPs, the Municipal Code of Chicago section 9-

[17] City of Chicago, Department of Business and Consumer Protection. (2020, June 29), "Chicago Taxi Placard." June 2020, https://www.chicago.gov/content/dam/city/depts/bacp/publicvehicleinfo/Chicabs/chicagotaxiplacard20200629.pdf.

114-265 permits the taxicab and livery industry to engage in dynamic pricing as long as the trip is secured through an app/mobile platform and the passenger accepts the quoted/estimated fare. The final fare may not be more than 20% above the quoted/estimated initial fare.

In July 2021, the taxicab app Curb announced that it will begin providing a feature that lets taxicab passengers view the full price of their rides before their trips begin – as opposed to meters that run during the ride.[18]

Affordability

Transportation costs, in addition to other factors, can present barriers for passengers, ultimately influencing passenger choice among modes of transportation. For example, public transit options cost less but it may take longer to arrive at the passenger's destination when compared to PPV options. Driving a personal car is perhaps the most convenient option if available, but parking and other costs associated with car ownership can be cost prohibitive. Taxicab fares are regulated by the City but can also be expensive for some passengers in areas with less availability and longer wait times.[19] Lastly, TNPs respond to trip requests relatively quickly in high demand areas[20] (please see Section 6e. PPV Service Response Times), but fares are less reliable and dynamic pricing can influence a passenger decision to take a TNP ride. These tradeoffs and others influence passenger transportation choices.

The University of Illinois at Chicago (UIC), Equiticity, and the Metropolitan Planning Council (MPC) collaborated to study transportation barriers and solutions for job seekers in the South and West sides of Chicago. Their report, *Commuting in Context: A Qualitative Study of Transportation Challenges for Disadvantaged Job Seekers in Chicago, IL*, concluded that individuals earning minimum wage spend at least half a week's pay on monthly transportation costs, whether they take public transportation or drive.[21]

TNP Trip Costs to Passengers
Study researchers analyzed data from the City Data Study Period[22] to determine the average costs of TNP and taxi trips and their affordability for minimum wage workers. **The average cost of a TNP trip across the full 12-week City Data Study Period was $11.18.**

Crowe also analyzed average trip costs to passengers by each individual week within the City Data Study Period (12 weeks in total). Depending on the specific week, the **average cost of a TNP trip ranged from $8.53 to $15.57.** This is the equivalent of 39-72 minutes of minimum wage work (which was $13.00/hour between 7/1/2019 and 6/30/2020)[23] for a passenger. See Figure 2.

[18] Staff, C. B. S. (2021, July 13) *Curb App Set to Begin Offering Upfront Price Option for Chicago Taxis as They Narrow Gap with Rideshares.* CBS Chicago. https://chicago.cbslocal.com/2021/07/13/curb-app-taxis-uprfont-pricing/.
[19] Brown, A., & LaValle, W. (2020, February 10). *Hailing a change: Comparing Taxi and Ridehail Service Quality in Los Angeles.* Transportation 48. https://link.springer.com/article/10.1007/s11116-020-10086-z#citeas.
[20] Brown, A., & LaValle, W. (2020, February 10). *Hailing a change: Comparing Taxi and Ridehail Service Quality in Los Angeles.* Transportation 48. https://link.springer.com/article/10.1007/s11116-020-10086-z#citeas.
[21] Coren, C., & Lowe, K. (2020, May 4). *Commuting in Context: A Qualitative Study of Transportation Challenges for Disadvantaged Job Seekers in Chicago, IL.* Chicago; University of Illinois at Chicago. www.metroplanning.org/uploads/cms/documents/coren.lowe.2020.commuting.in.context.pdf
[22] The City Data Study Period is 12 non-consecutive weeks (one week per quarter) for the years 2018 – 2020.
[23] The Chicago Minimum Wage Ordinance (2014). Municipal Code of Chicago, Chapters 1 – 24.

Figure 2: Average TNP Trip Cost by City Data Period Study Week

Study Week	Week Beginning	Average Single Fare Trip ($)	Trip Record Count in City Data Study Period	Chauffeur Record Count in City Data Study Period
1	12/31/2017	8.53	553,005	20,490
2	4/1/2018	9.25	1,886,018	48,941
3	7/1/2018	9.79	1,779,028	52,389
4	10/1/2018	11.13	1,945,451	54,120
5	12/31/2018	9.71	1,863,734	54,565
6	4/1/2019	11.18	2,081,200	54,535
7	7/1/2019	11.29	1,844,337	54,785
8	10/1/2019	12.29	1,969,050	55,984
9	12/31/2019	12.99	1,863,195	56,531
10	4/1/2020	11.09	331,027	12,787
11	7/1/2020	15.57	742,777	19,377
12	10/1/2020	12.94	860,690	23,584

Please note that in Figures 2 and 3, the two record count columns reflect the number of records analyzed from the City Data Study Period for each respective study week. The Chauffeur Record Count column represents the number of chauffeurs who provided at least one trip during the indicated week.

Taxi Trip Costs to Passengers

The average cost of a taxi trip across the full 12-week City Data Study Period was $13.82.

Crowe also analyzed average trip costs to passengers by each individual week within the City Data Study Period. Depending on the specific week, **the average cost of a taxicab trip ranged from $12.30 to $16.55**, or the equivalent of 57 to 76 minutes of minimum wage work for a passenger. See Figure 3.

Figure 3: Average Taxi Fare Cost by City Data Period Study Week

Study Week	Week Beginning	Average Single Fare Trip ($)	Trip Record Count in City Data Study Period	Chauffeur Record Count in City Data Study Period
1	12/31/2017	12.30	193,233	3,922
2	4/1/2018	12.91	304,693	4,472
3	7/1/2018	12.46	225,094	4,516
4	10/1/2018	14.76	319,595	4,681
5	12/31/2018	13.21	202,463	4,194
6	4/1/2019	14.61	326,620	4,847
7	7/1/2019	13.31	217,144	4,646
8	10/1/2019	15.07	300,788	4,770
9	12/31/2019	13.64	173,002	3,962
10	4/1/2020	15.25	13,765	578
11	7/1/2020	16.55	27,600	560
12	10/1/2020	16.52	38,789	819

This means a minimum wage earner can spend anywhere from almost 66% to more than 100% of an hour's wages for an average TNP or taxicab trip.

Fare Changes Over Time

The Project for Middle Class Renewal (PMCR) at the University of Illinois at Urbana-Champaign and the Illinois Economic Policy Institute (ILEPI) jointly published a report called *On-Demand Workers, Sub-Minimum Wages.* This report examined data on transportation network provider drivers and trips in the City of Chicago. The analysis indicates that TNP fares increased 2.8% in September 2020 (during COVID-19) compared to September 2019 (before COVID-19). This TNP fare increase is despite reductions in travel time (-18.3%) and trip miles (-5.2%). In addition to fares increasing, there was a 39.2% reduction in tips from passengers to chauffeurs.[24] See Figure 4.

Figure 4: September 2019 vs. September 2020 TNP Trip Time, Miles, Fares, and Tips [25]

Sample in Mid-September	Sample Trips	Trip Time (Seconds)	Trip Miles	Trip Fare	Tip	Total Cost
2019	56,028	1,166.4	6.75	$12.99	$0.81	$17.02
2020	21,946	952.5	6.39	$13.36	$0.49	$17.78
Year-Over-Year Change	**-60.8%**	**-18.3%**	**-5.2%**	**2.8%**	**-39.2%**	**4.4%**

6b. PPV Service Availability

The following section reviewed PPV service availability across Chicago geographies. This section includes the following key findings:

- The majority of TNP and taxicab trips take place in northside and northwest Chicago community areas.
- In Chicago, community areas with the longest commute times coincide with areas with the largest population of Black/African American residents.
- The City of Chicago's Public Passenger Vehicles Underserved Areas Task Force found that the most underserved areas were identified on the South, Southwest, and West sides, as well as some areas on the North side.

Service Variability Across the City

Access to PPV services varies across Chicago community areas. Based on trip data reported to the City, the majority of TNP and taxicab trips take place in northside and northwest Chicago community areas. As of July 2021, the Near North Side had the most TNP and taxicab pick-ups, followed by the Loop and Near West Side.

See Figures 5-8 on the following page, which are from the City's internal data visualization dashboards based on trip data reported to the City,. **Within Figures 5-8, darker shaded areas represent community areas with the highest number of taxicab and TNP pickups**. These figures use definitions of "served" and "underserved" community area consistent with the Public Passenger Vehicles Underserved Areas Task Force; please see the footnotes in Figures 5-8 for definitions, which are discussed further in Section 6d. Underserved Areas of this report.

[24] Manzo, F., Frank & Bruno, R. (2021, January 19). On-Demand Workers, Sub-Minimum Wages. Chicago; Illinois Economic Policy Institute. https://illinoisepi.files.wordpress.com/2021/01/ilepi-pmcr-on-demand-workers-sub-minimum-wages-final.pdf.
[25] Manzo, F., and Bruno, R. (2021, January 19). *On-Demand Workers, Sub-Minimum Wages. Chicago*. Illinois Economic Policy Institute. https://illinoisepi.files.wordpress.com/2021/01/ilepi-pmcr-on-demand-workers-sub-minimum-wages-final.pdf.

Figure 5: Total Chicago Taxi Pick-Ups, by Served[26] Community Area (2018–2020)[27]

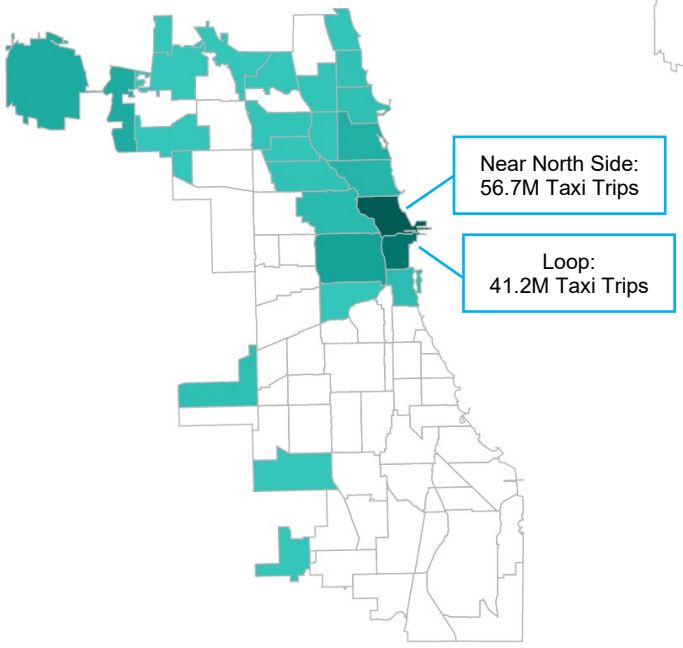


Figure 6: Total Chicago Taxi Pick-Ups, by Underserved[28] Community Area (2018–2020)[27]

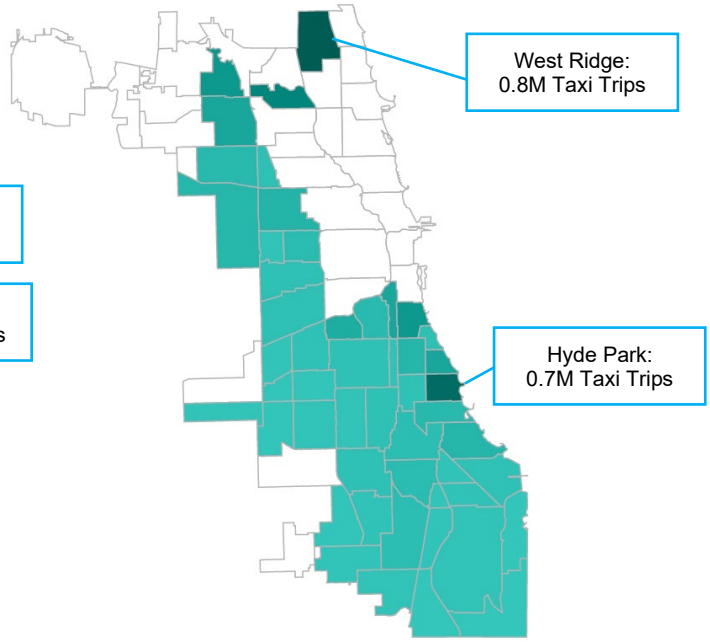


Figure 7: Total Chicago TNP Pick-Ups, by Served[26] Community Area (2018–2020)[27]

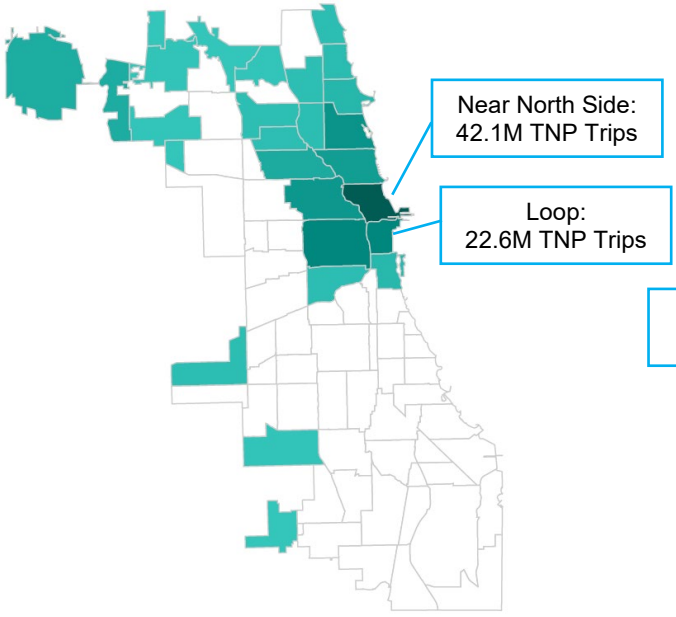
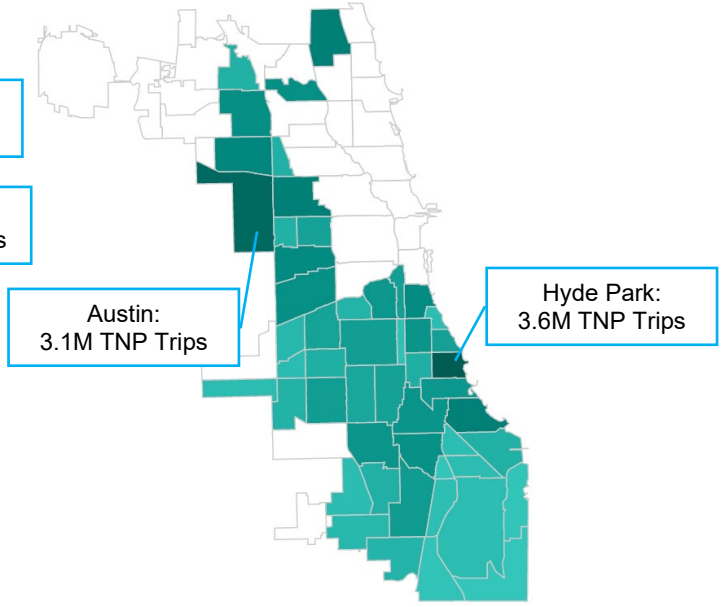


Figure 8: Total Chicago TNP Pick-Ups, by Underserved[27] Community Area (2018–2020)[27]



[26]Per the Public Passenger Vehicles Underserved Task Force, "served" community areas are those most frequently serviced by PPVs in Chicago.

[27] Figures 5-8 are from the City's internal dashboards based on trip data reported to the City.

[28] Per the Public Passenger Vehicles Underserved Task Force, "underserved" community areas are those least often serviced by PPVs in Chicago.

This difference in service availability across the City disproportionately impacts the ability of passengers (or would-be passengers) to reach jobs, medical care, family/social events, and other ways of participating in life and the local economy. The Chicago Metropolitan Agency for Planning (CMAP) report *On to 2050 Snapshot – Travel Trends: Understanding How Our Region Moves* notes that in Chicago, like many larger cities, high wage jobs are concentrated in areas with better access to transit, particularly within Chicago's Loop. CMAP explains that "high earners also have more choice in the housing market and may choose to live in areas with better access to public transportation, while low and moderate earners may struggle to afford living in communities that have good access to jobs."[29]

Within the City of Chicago, community areas with the longest commute times coincide with areas with the largest population of Black/African American residents.[30] The National Bureau of Economic Research has shown that long commute times play a significant role in predicting residents' upward mobility.[31]

PPVs, specifically TNPs, may help mitigate the lack of access to public transportation since PPVs can pick up a passenger from any location. However, that may be limited by chauffeurs' willingness or ability to serve certain areas. Passengers located outside of high-traffic areas may experience longer wait times for service, longer distances and drive times, and increased costs for their travel.

In addition, passengers in all areas of the City may be impacted by insufficient supply at times. For example, after large scheduled events or unforeseen incidents (such as a public transit delay), there may be a surge in passenger demand that is unfulfilled by the available chauffeur supply. There have been similar impacts to service availability as the City recovers from the COVID-19 pandemic. As passenger demand has risen, the chauffeur supply has at times lagged. (Please see the ***Chauffeur Conditions and Effects on License Holders*** report for discussion of various TNP incentives to recruit additional chauffeurs.) From the passenger perspective, the impacts include delays for passengers and potentially higher costs due to dynamic pricing models.

6c. Accessibility for Passengers with Disabilities

The following section provides an overview of PPV accessibility for passengers with disabilities. This section includes the following key findings:

- Persons with disabilities are more reliant and take twice as many for-hire trips than persons without disabilities. While persons without disabilities take 4.1 for-hire trips on average annually, persons with disabilities take 8.2 trips per year on average.

The City's Accessibility Fund was created to taxicab and TNP services for with disabilities. Both the taxicab and TNP industries pay fees into the Accessibility Fund to support expansion of wheelchair accessible vehicles (WAVs) and service in both industries.

All WAV taxis and TNPs are required to include side/curb-entry ramps, wheelchair fasteners, shoulder seat belts, and meet other vehicles requirements of the Americans with Disabilities Act (ADA), in addition to meeting other City requirements that pertain to all PPVs.

Originally, Accessibility Fund dollars primarily subsidized the addition of new wheelchair accessible taxicab vehicles. Today, in efforts to support WAV taxicabs, the Accessibility Fund (1) pays for the Centralized WAV Taxicab Dispatch service; (2) offers up to $25,000 to subsidize conversion costs of a minivan to a WAV taxi; (3) offers up to $9,000 annually to reimburse for maintenance costs of a WAV taxi;

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[29] *Congestion Mitigation and Air Quality Improvement Program.* Chicago Metropolitan Agency for Planning. https://www.cmap.illinois.gov/mobility/strategic-investment/cmaq.
[30] Coren, C., & Lowe, K. (2020, July 21). *Commuting in Context: A Qualitative Study of Transportation Challenges for Disadvantaged Job Seekers in Chicago, IL*. University of Illinois at Chicago. https://www.metroplanning.org/uploads/cms/documents/final.7.21.20.pdf.
[31] Chetty, R., Hendren, N., Kline, P., & Saez, E. (2014, January 23). *Where is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States*. NBER. https://www.nber.org/papers/w19843.

and (4) for WAV taxicab drivers a subsidy of $25 for a 12-hour lease or $50 a 24-hour lease to cover the deferential fuel and other costs of driving a WAV taxi.[32]

The Accessibility Fund has supported the increase in the number of available WAV taxicabs in Chicago. Please see Figure 9 below for additional detail.

Figure 9: WAV Taxicabs in Chicago (2011–2021)

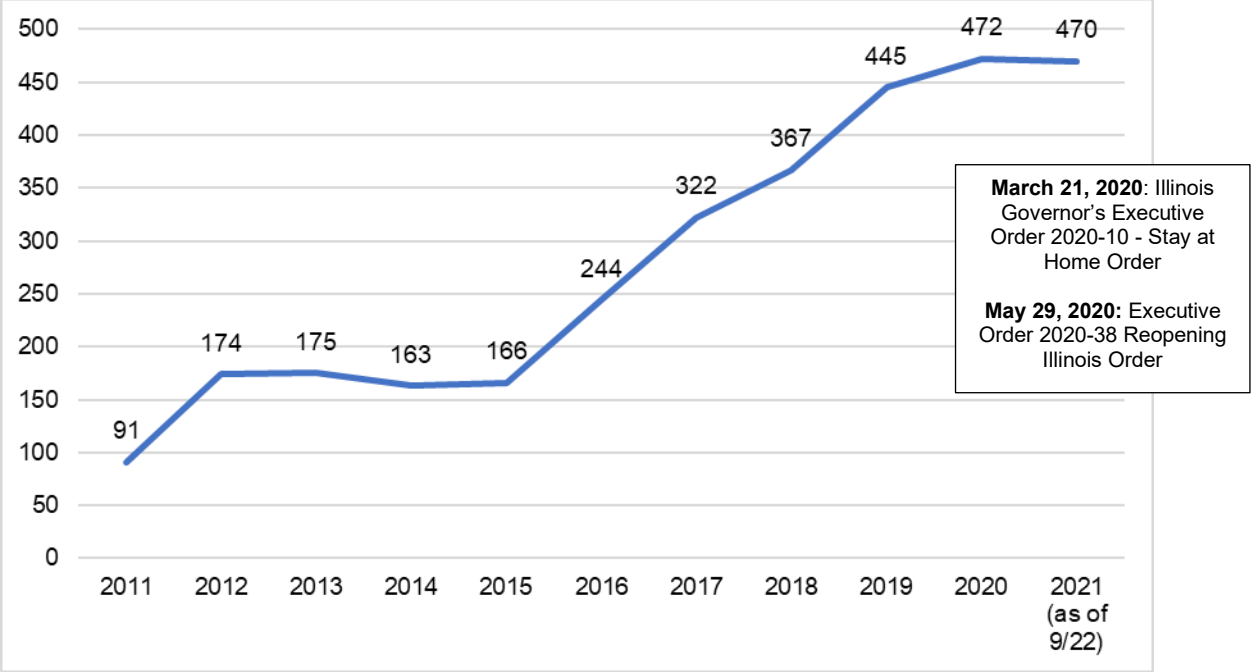

Figure 10 shows the number of WAV trips completed through and reported by the City of Chicago Centralized WAV Taxicab Dispatch Service vendors. Please see Figure 10 below.

Figure 10: Number of Taxicab WAV Trips (2014–2021)

Year	Number of WAV Trips
2014	40,461
2015	41,290
2016	66,231
2017	90,949
2018	77,282
2019	82,035
2020	39,351
2021 (through 8/30)	21,284

The City of Chicago Centralized WAV Taxicab Dispatch Service (1-855-WAV-1010) connects persons who require WAVs to WAV taxicabs. At the time of this report, Curb is the City of Chicago Centralized WAV Taxicab Dispatch Service contractor and WAV taxi trips can also be requested through the Curb

[32] *Chicago's Wheelchair Accessible Vehicle (WAV) Incentive Program.* https://www.chicago.gov/content/dam/city/depts/bacp/publicvehicleinfo/Wheelchairaccessibletaxis/wavtaxicabsubsidieseffectiveapril62020flyer.pdf

app (gocurb.com/chicagowav).[33]

In June 2016, the Chicago City Council passed legislation requiring TNPs to submit plans to enhance service to passengers with disabilities. BACP, in consultation with the Mayor's Office for People with Disabilities (MOPD), approved TNP plans in 2017 to (1) use their company mobile applications to connect passengers to the City's existing available WAV taxicabs and (2) increase WAVs on the TNP platforms.[34]

In November 2018, Chicago introduced a pilot program offering incentives to TNP companies to provide wheelchair accessible TNP service. Program requirements included the following:

- When requesting TNP WAV trips, passengers must specifically request WAV service through the affiliated TNP platform
- TNP WAV trips must be provided by TNP-affiliated chauffeur licensed and qualified in compliance with Chapter 9-115 of the Municipal Code of Chicago
- TNP WAV trip chauffeurs must comply and be in good standing with applicable City of Chicago laws, including compliance with City of Chicago debt
- TNP WAVs must comply with Chapter 9-115 of the MCC
- TNPs licensee must submit a completed *TNP WAV Incentive Subsidy* form with supporting documents, including trip data, to BACPPV@CityofChicago.org to request eligible incentive subsidies for WAV trips completed using the TNP platform.

The Accessibility Fund offers TNP companies a $30 per WAV trip subsidy for WAV trips performed through its TNP platform which meet specific requirements detailed in Transportation Network Provider Rule TNP4.04.[35]

In Chicago, a wheelchair user is able to request a wheelchair accessible vehicle on TNP platforms. There has also been growth in the number of WAV TNP trips reported by TNP licensees to the City. Please see Figure 11 below.

Figure 11: Number of TNP WAV Trips (2017–2021)

Year	Number of WAV Trips
2017	9,638
2018	29,035
2019	35,952
2020	25,368
2021 (through 8/30)	20,252

The San Francisco Municipal Transportation Agency reported in *TNCs and Disabled Access* that persons with disabilities are more reliant and take twice as many for-hire trips than non-disabled persons. While non-disabled persons take 4.1 for-hire trips on average annually, people with disabilities take 8.2 trips per year on average.[36]

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[33]BACP. "Chicago Wheelchair Accessible Taxicabs (WAV)." https://www.chicago.gov/city/en/depts/bacp/provdrs/vehic/svcs/wav.html.
[34] Mayor Emanuel Announces Major Increase in Wheelchair-Accessible Transit Options for Residents and Visitors Throughout Chicago. (2017, May 8). *Chicago.gov*. www.chicago.gov/city/en/depts/mayor/press_room/press_releases/2017/april/Wheelchair_Accessible_Transit.html.
[35] "City of Chicago Business Affairs and Consumer Protection PUBLIC VEHICLE INDUSTRY NOTICE." April 6, 2020. https://www.chicago.gov/content/dam/city/depts/bacp/publicvehicleinfo/publicvehicleindustrynotices/2020/pvnotice20012tnpwavincreasedincentives.pdf.
[36] San Francisco Municipal Transportation Agency: Taxis and Accessible Services Division. (2019, April 26). *TNCs and Disabled Access*. San Francisco. https://www.sfmta.com/sites/default/files/reports-and-documents/2019/05/tnc_and_disable_access_whit_paper-rev11_2.pdf

Persons with physical disabilities report that taxicabs and TNPs can provide more comfort and accessibility when traveling than other public transportation. Survey respondents from UIC's *Commuting in Context* report described accessibility barriers with other modes of transportation, including broken elevators at CTA stops, unpleasant or unsafe elevators, curbs at bus stops that increase the difficult of boarding a bus, and inaccessible or limited seating on buses.[37] PPV transportation options may combat some of these challenges by offering private, safer, and more reliably accessible services.

6d. Underserved Areas

In May 2014, the City launched a Public Passenger Vehicles Underserved Areas Task Force to review the accessibility of transportation services across Chicago. The Task Force found that the most serviced areas of the City include downtown, the South and West Loop, the Near North Side, the northeast side, and Midway and O'Hare airports; these are called **"served community areas**" herein. The most underserved areas were identified on the South, Southwest, and West sides, as well as some areas on the North side; these are called "**underserved community areas**" herein.

Figures 12 and 13 show that the majority of both taxi and TNP pick-ups between 2018 and 2020 occurred in served community areas.

In 2018, 90.56% of all taxicab pick-ups occurred in served community areas and 2.54% of pick-ups occurred in underserved community areas. In 2019, 89.91% of all taxicab pick-ups occurred in served areas and 3.27% occurred in underserved community areas. In 2020, 82.85% of all taxicab pickups occurred in served community areas and 9.95% occurred in underserved community areas. See Figure 12.

Figure 12: Percentage of Taxi Pick-Ups in Underserved & Served Community Areas (2018–2020)

Year	Served Community Area	Underserved Community Area	Unknown/Unreported Community Area
2018	90.56%	2.54%	6.90%
2019	89.91%	3.27%	6.82%
2020	82.85%	9.95%	7.20%

Between 2018 – 2020, the majority of TNP pick-ups also occurred in served community areas; however, TNP data showed a higher percentage of pick-ups in underserved community areas as compared to taxicab pick-ups over the same timeframe. In 2018, 73.42% of all TNP pick-ups occurred in served community areas and 17.90% of pick-ups occurred in underserved community areas. In 2019, 74.17% of all TNP pick-ups occurred in served areas and 19.49% occurred in underserved community areas. In 2020, 63.44% of all TNP pickups occurred in served community areas and 29.01% occurred in underserved community areas. See Figure 13.

Figure 13: Percentage of TNP Pick-Ups in Underserved & Served Community Areas (2018–2020)

Year	Served Community Area	Underserved Community Area	Unknown/Unreported Community Area
2018	73.42%	17.90%	8.68%
2019	74.17%	19.49%	6.34%
2020	63.44%	29.01%	7.55%

[37] Coren, C., & Lowe, K. (2020, July 21). *Commuting in Context: A Qualitative Study of Transportation Challenges for Disadvantaged Job Seekers in Chicago, IL.* University of Illinois at Chicago. https://www.metroplanning.org/uploads/cms/documents/final.7.21.20.pdf.

Figures 14 and 15 depict the Top 10 TNP pick-up areas in Chicago for both served[38] and underserved[39] community areas and the number of trips that occurred in 2017. Note that scale of Figures 14 and 15 are different. Figure 14 illustrates trips in served communities in the millions; Figure 15 illustrates trips in underserved communities in the thousands. The underserved community areas have significantly fewer TNP trip pick-ups (average 48.2 thousand trips per community in 2017) than the served areas (average 5.75 million trips per community in 2017).

Figure 14: Top 10 Pick-Up Locations, by Served Community Area and Year

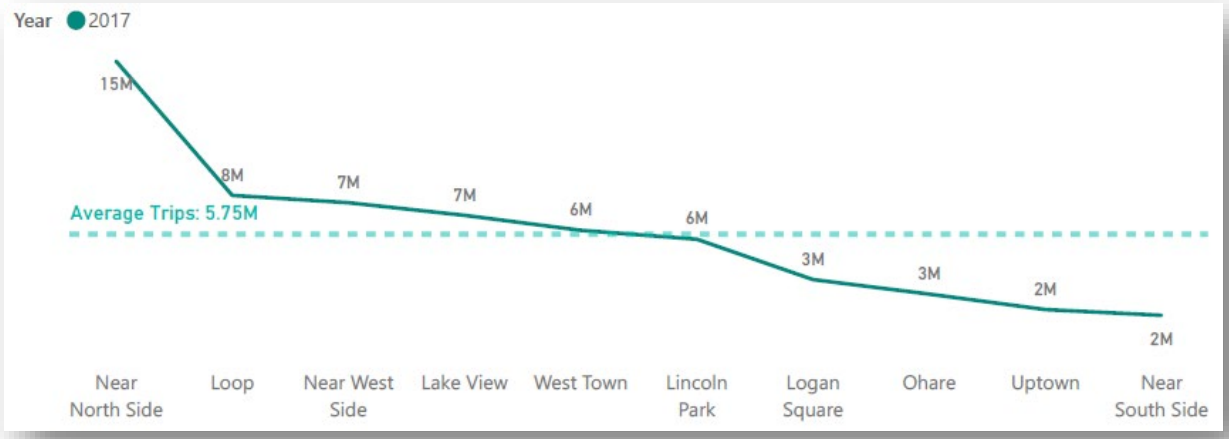

Figure 15: Top 10 Pick-Up Locations, by Underserved Community Area and Year

[38] Per the Public Passenger Vehicles Underserved Task Force, "served" community areas are those most frequently serviced by PPVs in Chicago.
[39] Per the Public Passenger Vehicles Underserved Task Force, "underserved" community areas are those least often serviced by PPVs in Chicago.

6e. PPV Service Response Times

Passenger choices among PPV options may be influenced by service response time. Crowe analyzed PPV trip data submitted by TNP companies in March of 2021 for one week per quarter from the first quarter of 2018 through the last quarter of 2020. Please see Figure 1 for exact dates for the City Data Study Period.

This section includes the following key findings:

- Median service response times for the top ten underserved[40] community areas ranged between 3 and 7 minutes.
- Most served[41] community areas also have the shortest median service response times, and the underserved community areas have the longest median response times.

Research suggests some passengers may prefer TNPs due to their reliability and perceived shorter wait times compared to taxicabs,[42] however this preference varies based on service availability. Taxicabs are not consistently able to provide passengers with real time tracking, whereas TNPs show app users the approximate pick-up time and location tracking, giving passengers a more reliable estimated arrival time. Service response times for City of Chicago taxicabs and liveries are not available, and liveries tend to be pre-arranged for scheduled events/trips.

This study analyzed TNP trip data for one week per quarter from 2018 through the last quarter of 2020 Where available, the researchers used census tract data to associate TNP trips with Chicago's 77 defined community areas. Using this information, Crowe determined average service response time for all Chicago community areas.

Figure 16 shows response times for trips requested in the top 10 most underserved community areas.[43] As shown, these median response times ranged between 3 and 7 minutes.

Figure 16: TNP Response Times for Top Ten Underserved[44] Community Areas

Community Area	Median Service Response Time	Average Service Response Time
Hegewisch	7	8
East Side	7	7
Riverdale	6	6
Burnside	5	5
Pullman	5	5
South Deering	6	5
Clearing	5	5
Avalon Park	4	4
Calumet Heights	4	4
Fuller Park	3	4

[40] Per the Public Passenger Vehicles Underserved Task Force, "underserved" community areas are those least often serviced by PPVs in Chicago.
[41] Per the Public Passenger Vehicles Underserved Task Force, "served" community areas are those most frequently serviced by PPVs in Chicago.
[42] Brown, A., & LaValle, W. (2020, February 10). *Hailing a change: Comparing Taxi and Ridehail Service Quality in Los Angeles.* Transportation 48. https://link.springer.com/article/10.1007/s11116-020-10086-z#citeas.
[43] Per the Public Passenger Vehicles Underserved Task Force, "underserved" community areas are those least often serviced by PPVs in Chicago.
[44] Per the Public Passenger Vehicles Underserved Task Force, "underserved" community areas are those least often serviced by PPVs in Chicago.

As a point of comparison, 9 of the top 10 most served community areas[45] had a median response time of 2 minutes (the only exception was O'Hare with a median response time of 7 minutes). **The most served community areas also have the shortest median service response times, and the underserved community areas have the longest median response times.**

Please see Appendix A for the average and median service response times across all 77 community areas within the City of Chicago.

Potential Impact of Discrimination on Service Denials/Cancellations

A University of California Los Angeles (UCLA) PhD dissertation titled *Ridehail Revolution: Ridehail Travel and Equity in Los Angeles* found that Black passengers waiting on taxicabs/TNPs are likely to face longer wait times and be cancelled on more often than white, Asian, and Hispanic passengers. In this study, taxicab chauffeurs in L.A. were 73% more likely to cancel on Black passengers than white. In trips taken by students, TNP chauffeurs canceled on Black passengers 6-7% of the time, while taxicab chauffeurs canceled on Black passengers 26% of the time.[46] Within this study, cancelations were defined as: a dispatcher failing to answer a passenger call requesting a taxicab, a dispatcher later informing a rider that no taxicabs were available; a taxicab not arriving within one hour; or a chauffeur refusing a ride upon arrival.[47]

Similarly, the authors of *Racial and Gender Discrimination in Transportation Network Companies* found evidence of discrimination within rideshare services in their study. That study analyzed nearly 1,500 rideshare trips in Seattle, WA and Boston, MA. In Boston, the authors reported more frequent cancellations for passengers when they used African American-sounding names. Across all trips, the cancellation rate for African American-sounding names was more than twice as frequent compared to white-sounding names. Male passengers requesting a ride in low-density areas were more than three times as likely to have their trip canceled when they used an African American-sounding name than when they used a white-sounding name.[48]

This research highlighted that Black passengers and other passengers of color may face discrimination when utilizing PPV services. As the City does not track information on passengers, there was limited data available to assess discriminatory PPV practices in Chicago. To address this gap in information, the City should consider creating, distributing, and analyzing a brief annual passenger survey to Chicago residents to better understand the needs of passengers, such as PPV affordability, accessibility, and service availability to passengers. See Section 8. Recommendations.

6f. Passenger and Chauffeur Safety

BACP implements and promotes consumer and passenger safety measures in an effort to prioritize public safety. BACP's webpage chicabs.org is dedicated to passenger information, including information on safety measures. In addition, since 2021 BACP has an active "RideSmartChicago"[49] campaign educating passengers on spotting "fake" cabs and steps to take for a safe incident free trip.

This section discusses the health and safety of passengers while traveling in public passenger vehicles. Key findings include:

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[45] Per the Public Passenger Vehicles Underserved Task Force, "served" community areas are those most frequently serviced by PPVs in Chicago.
[46] Cava, M. D. (2018, June 28). Marco della. *Blacks Face Longer Wait Times on Uber, Lyft than Other Races – Worse for Taxis, Study Says.* USA Today. http://www.usatoday.com/story/tech/2018/06/27/blacks-face-longer-wait-times-uber-lyft-than-other-races-and-its-worse-taxis/735578002/.
[47] Brown, A. E. (2018, June 2). Brow, Anne Elizabeth. *Ridehail Revolution: Ridehail Travel and Equity in Los Angeles.* https://escholarship.org/uc/item/4r22m57k.
[48] Ge, Y., Knittel, C. R., MacKenzie, D., & Zoepf, S. (2016, October). *Racial and Gender Discrimination in Transportation Network Companies.* National Bureau of Economic Research. https://www.nber.org/system/files/working_papers/w22776/w22776.pdf.
[49]"Ride Smart Chicago - Passenger Information." https://www.chicago.gov/city/en/depts/bacp/supp_info/ridesmartchicago.html.

- Some passengers report that personal safety is a factor in determining transportation choice (such as choosing TNPs / ride-hail over public transit).
- TNP companies have instituted policies and features to improve safety for passengers and chauffeurs. These include emergency 911 features that send information such as location, license plate, and car model to a dispatcher if a driver or rider taps the button; location updates to third parties (such as family/friends) at the request of a passenger; and passenger verification programs.

PPVs may have perceived safety benefits to some passengers compared to other transportation options. Coren and Lowe's 2020 study *Mobility in and Beyond Communities: A Qualitative Study of Mobility Justice Issues on the South and Southwest Side* found that some passengers find that PPVs help avoid unwanted confrontations and threats of violence associated with using public transportation.[50] Focus group participants reported that public transportation can feel unsafe to certain passengers with threats of violence, and they often take precautions to avoid being targeted, such as avoiding shopping bags, not wearing headphones, or carrying mace.

TNP companies require annual background checks for their chauffeurs, ongoing criminal monitoring, and a mandatory training program for chauffeurs with RAINN, an anti-sexual violence organization. In 2015, City promulgated and implemented TNP Rule 1.10, which requires TNP companies to notify the City of specific types of driver deactivations in the interest of public safety. The intent of Rule 1.10 was to deter a driver deactivated for safety concerns on one platform from operating on another platform perpetuating the safety concern.

In March 2021, Lyft and Uber announced the Industry Sharing Safety Program, an initiative intended to share information about chauffeurs removed from the platforms due to safety incidents surrounding sexual and physical assaults resulting in fatalities, which closely followed the City's previously implemented NP Rule 1.10 framework.[51] In addition, Uber has a "Safety Toolkit" in-app emergency feature in place and recently added a 911 feature that sends the location, license plate and car model to a dispatcher if a driver or rider taps the button.[52] Lyft has a similar feature in which a passenger can tap a button to share (1) their approximate location, (2) when a passenger is in a ride, and (3) how long they have been in a ride with other contacts.[53]

In response to an increase in carjackings in the City of Chicago in 2021, BACP and the Chicago Police Department partnered to provide relevant safety information to all chauffeurs, including publications like "Carjacking Prevention Tips"[54] and "Safety Tips for Cab Operators."[55]

Uber launched a new passenger verification program in April 2021.[56] Passengers who use anonymous payment methods like prepaid debit cards or gift cards now must also upload a driver's license, state identification, or passport before booking a ride. Their identification will be checked for validity.

Note that requiring passenger photographs and/or destinations has raised concerns of increased racial discrimination against passengers.[57] Please see Section 6e. PPV Service Response Times for further

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[50] Coren, C., & Lowe, K. (2020, July 21). *Commuting in Context: A Qualitative Study of Transportation Challenges for Disadvantaged Job Seekers in Chicago, IL*. University of Illinois at Chicago. https://www.metroplanning.org/uploads/cms/documents/final.7.21.20.pdf.

[51] "*Lyft and Uber Launch Industry Sharing Safety Program in the US.* Lyft. (2021, March 11). https://www.lyft.com/blog/posts/lyft-and-uber-launch-industry-sharing-safety-program-in-the-us.

[52] *Safety Toolkit and App Safety Features for Riders.* Uber. https://www.uber.com/za/en/ride/safety/rider-safety-features/

[53] *Sharing your driving location with friends and family.* Lyft. https://help.lyft.com/hc/e/articles/360037644574-Sharing-your-location-with-trusted-contacts.

[54] Chicago Police Department. "Carjacking Prevention Tips." https://www.chicago.gov/content/dam/city/depts/bacp/publicvehicleinfo/publicchauffer/cpdcarjackingpreventiontips.pdf.

[55] Chicago Police Department. "Public Safety Tips: Cab Operators." https://www.chicago.gov/content/dam/city/depts/bacp/publicvehicleinfo/taxiindustrynotices/CabOperatorSafetyTips06272017.pdf

[56] *Launching New Rider Verification Feature to Enhance Safety on the Road*. Uber (2021, April 9). https://www.uber.com/en-US/blog/rider-verification-feature/.

[57] Dickey, M. R. (2016, December 29). *In light of discrimination concerns, Uber and Lyft defend their policies to show rider names and photos*. TechCrunch. https://techcrunch.com/2016/12/29/uber-lyft-respond-al-franken-about-discrimination/.

discussion of the potential impact of such discrimination.

6g. Passenger Demographics

The following section provides an overview of demographic information on PPV passengers in urban cities, including Chicago. This section includes the following key findings:

- TNP trips are most frequently used by younger passengers with higher incomes; by passengers that do not own personal vehicles; and for traveling to one's home, to work, and for social/ recreational purposes.
- Taxicabs are most frequently used by passengers who do not own smartphones and by passengers in the central business district.
- Liveries are most frequently used by business travelers and for special events, such as weddings.

To protect passenger privacy, the City of Chicago does not collect data on PPV passengers.

TNP Passenger Demographics

Schaller's 2018 report, *The New Automobility: Lyft, Uber and the Future of American Cities*, provides useful TNP passenger demographic information. Figures 17-20 present TNP passenger demographics in nine metropolitan areas: **Chicago**, New York City, Boston, Los Angeles, Miami, Philadelphia, San Francisco, Seattle, and Washington, D.C.[58]

Taken together, Figures 17-20 illustrate that the average TNP passenger in a large metropolitan city is a 25 to 34-year-old high-income earner with a graduate or professional degree and is slightly more likely to be male.

Passenger Household Income: Figure 17 shows that in the nine metropolitan areas, households earning greater than $200,000 per year take nearly three times the number of annual TNP trips as other households.

Passenger Education: Figure 18 shows that in the nine metropolitan areas, TNP usage is highest among passengers who have obtained a graduate or professional degree.

Passenger Age: Figure 19 shows that in the nine metropolitan areas, passengers ages 25-34 average nearly twice as many annual TNP rides as all other age groups. Passengers ages 18-24 average the second most annual TNP trips per year.

Passenger Gender: Figure 20 shows that in the nine metropolitan areas, passengers that identify as male take slightly more TNP trips per year than passengers that identify as female.

[58] Schaller, B. (2018, July 25). Bruce. *The New Automobility: Lyft, Uber and the Future of American Cities.* New York City; Schaller Consulting. www.schallerconsult.com/rideservices/automobility.pdf.

Figure 17: Average Annual TNP Trips Per Passenger, by Household Income[59]

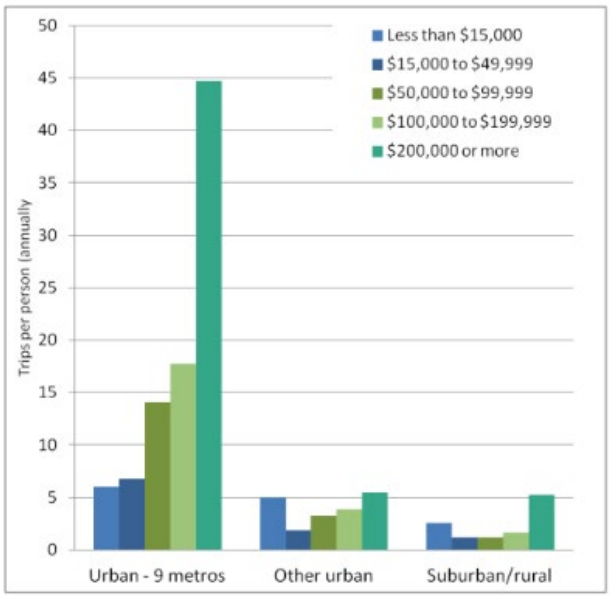


Figure 18: Average Annual TNP Trips Per Passenger, by Educational Attainment[60]

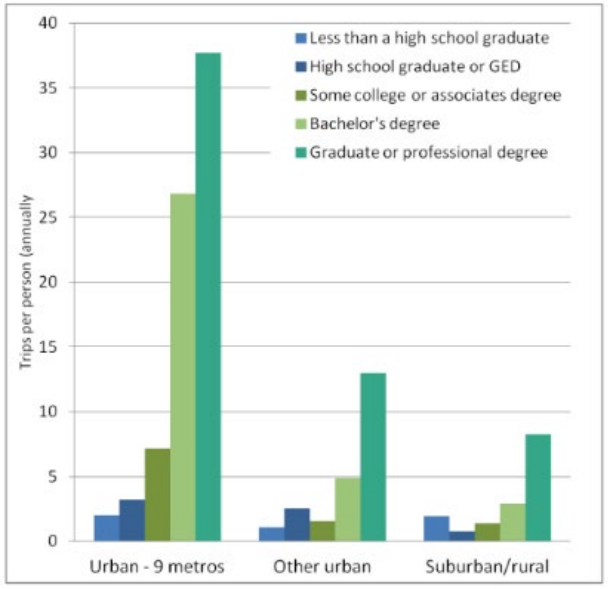


Figure 19: Average Annual TNP Trips Per Passenger, By Age[61]

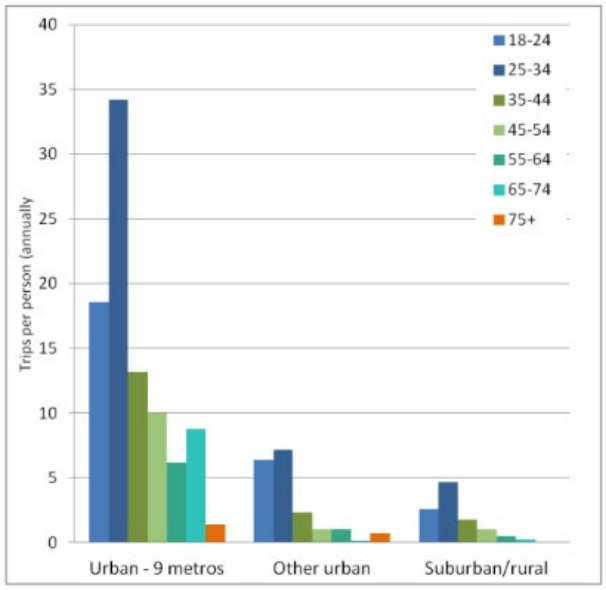
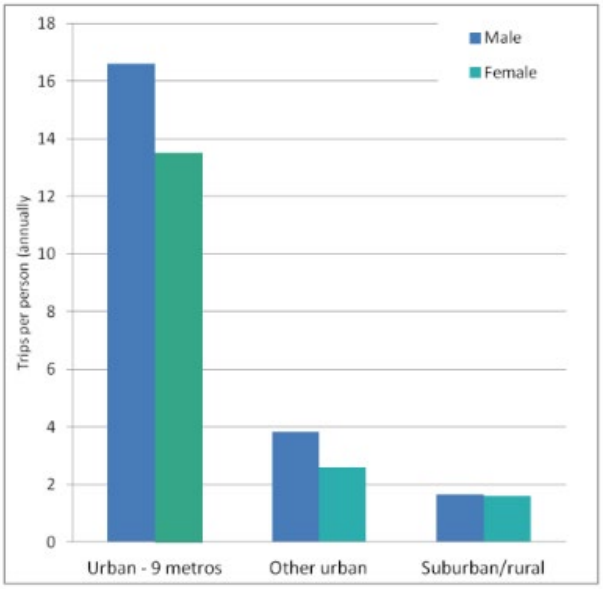


Figure 20: Average Annual TNP Trips Per Passenger, By Gender[62]



[59]Schaller, B. (2018, July 25). *The New Automobility: Lyft, Uber and the Future of American Cities*. New York City; Schaller Consulting. www.schallerconsult.com/rideservices/automobility.pdf. See Figure 8: "TNC Trip Rates by Household Income."

[60]Schaller, B. (2018, July 25). *The New Automobility: Lyft, Uber and the Future of American Cities*. New York City; Schaller Consulting. http://www.schallerconsult.com/rideservices/automobility.htm . See Figure 7: "TNC Trip Rates by Educational Level."

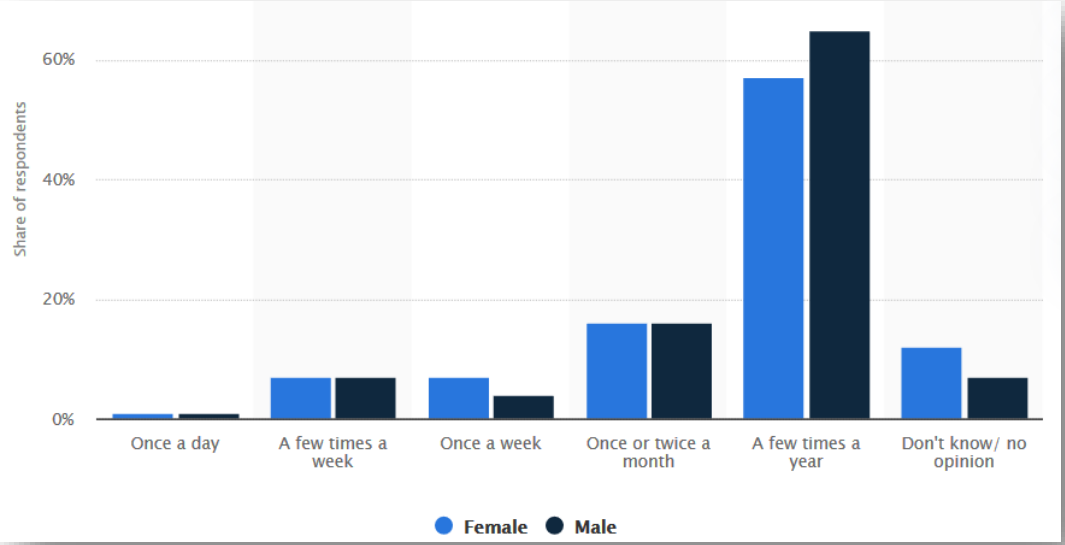
[61] Schaller, B. (2018, July 25). *The New Automobility: Lyft, Uber and the Future of American Cities.* New York City; Schaller Consulting. www.schallerconsult.com/rideservices/automobility.pdf. See Figure 6: "TNC Trip Rates by Age."

[62] Schaller, B. (2018, July 25). *The New Automobility: Lyft, Uber and the Future of American Cities.* New York City;

Taxicab Passenger Demographics

Research from Statista analyzed taxicab usage by adults in the United States in September 2018, broken down by gender. Figure 21 illustrates the survey results. For the most frequent taxicab users – those using taxis "Once a day" or "A few times a week," there was no significant gender difference. Slightly more females reported taking a taxicab "Once a week." The most significant gender difference was found for infrequent users, those who reported using taxicabs "a few times a year." For that category, more males (65% of male respondents) reported using taxicabs than females (57% of female respondents).

*Figure **21**: Taxicab Usage, by Passenger Gender (September 2018)*[63]



Livery Passenger Demographics

Livery passenger demographic data were not available for this report. During discussions with livery chauffeurs in Chicago in late 2020, chauffeurs reported anecdotally that livery passengers are most often business travelers, and that passengers may book livery services for multiple days at a time. In addition, passengers often use livery services for special events, such as weddings and proms.

6h. Passenger Complaints

The City of Chicago has a 311 non-emergency hotline to field Chicagoans' questions and concerns with City issues, and to request City services. Passengers can report feedback or concerns regarding PPV trips or chauffeurs to the 311 hotline or Chicago.gov/311. This section includes the following key finding:

- The vast majority of 311 calls related to both taxicab and TNP rides contained negative reports (complaints). Calls were most often related to poor service or driving.

Schaller Consulting. www.schallerconsult.com/rideservices/automobility.pdf. See Figure 9: "TNC Trip Rates by Gender."

[63] Statista Research Department. (2020, November 4). *U.S. Taxi Cabs Usage Frequency by Gender 2018*. Statista. http://www.statista.com/statistics/936427/taxi-cab-usage-frequency-united-states-by-gender/.

Taxicab vehicles are required by RULE TX4.02 to display a passenger and fare information placard inside the vehicle.[64] The placard contains text directing passengers to "call 311 for compliments or complaints." In addition, taxicab vehicles must display a public safety bumper sticker which directs public to report compliments or complaints to 311.

Pursuant to MCC § 9-115-150(i), all TNP chauffeurs are required to have a sign visible to the passengers in the rear seat of the vehicle that reads, "For compliments and complaints, please call 311."[65] In order to facilitate communication between the City and TNP passengers, BACP also recommends the content of the signage include all of the following:

For compliments and complaints, please call 311.
Phone: 311 or 312-744-5000
Online: chicago.gov/311

Prior to display in a transportation network vehicle, signage must be approved by the BACP Commissioner.

Liveries are not required to display comparable "311" signage.

In 2019, PPV-related calls to 311 contained 1162 taxicab reports and 154 TNP reports that included sufficient descriptive detail as to determine the nature of the reported event.

Study researchers categorized each report as either positive or negative feedback. TNP data included 0 instances of positive feedback and 154 instances of negative feedback. Taxicab data included 30 instances of positive feedback and 1113 instances of negative feedback. Negative feedback (complaints) was then coded to an additional category describing the nature of the complaint. Each complaint could be coded in one or multiple categories.

Please see Figure 22 for the number of 311 reports by category. As shown, the vast majority of 311 calls related to both taxicab and TNP rides contained negative reports (complaints), with the most common concerns related to poor service or driving. TNP mobile applications have their own passenger reporting systems within the mobile application; data from TNP mobile apps was not analyzed as part of this study.

Figure 22: Chicago 311 Reports for TNPs and Taxicabs (2019)

	TNP-Related Calls to 311	Taxicab-Related Calls to 311
Positive Feedback	**0**	**39**
Negative Feedback (sub-categories below; each report could be coded into one or more sub-categories)	**154**	**1113**
N1 = Poor Service or Driving (e.g., reckless/ dangerous driving, refusal of service to passengers)	*102*	*589*
N2 = Overcharge/Fare	*21*	*301*
N3 = Chauffeur Behavior (verbal or physical, body language)	*38*	*343*
N4 = Vehicle Condition (cleanliness, odor, damage).	*8*	*29*
N5 = Other Complaints	*4*	*8*

[64] Pursuant to RULE TX4.02: *Information Required to be Posted in the Interior of the Taxicab*
[65] Pursuant to RULE TNP1.17: *"311" Signage*

7. Effects of PPV Industry on the Chicago Economy

The following section addresses the impact of the PPV industry on the overall Chicago economy, including PPV industry earnings/income opportunities.

The City of Chicago generates an annual gross regional product (GRP) of over $698 billion, similar in size to nations like Poland and Switzerland. As of 2021, Chicago had more than 400 major corporate facilities, including 36 in the Fortune 500 and 31 in the S&P 500. The Chicago region is also one of the key transportation hubs in the United States. Before the COVID-19 pandemic, Transportation, Distribution, and Logistics (TDL) contributed $25.2B to the region's GDP.[66]

The COVID-19 pandemic and resulting economic crisis greatly impacted the Chicago transportation economy. Fewer drivers on the roads and fewer passengers on trains and buses during COVID resulted in an estimated $1 billion in lost transportation revenues according to a study from the Illinois Economic Policy Institute. This included the loss of $308 million in expected motor fuel taxes. CTA, Metra and PACE fares and sales tax receipts were down nearly $750 million. In March of 2019, taxicab passengers in Chicago took more than 1.5 million rides and paid approximately $27 million in fares, while in March 2020 passengers took 557,000 rides and paid $10 million in fares, representing a 63% decrease in fares.[67]

7a. Consumer Demand for Mobility and Transportation Options

A variety of factors influence passengers' choices of transportation. Passengers may select different modes of transportation based on availability, affordability, response time, trip time, safety / health concerns, and other factors and personal preferences. This section includes the following key findings:

- The arrival of TNPs in Chicago in 2014 and the increase in TNP trips beginning in 2015 may have resulted in CTA ridership loss.
- TNPs mainly compete with public transportation, walking, and biking as transportation options for passengers.
- Passengers reported opting for TNPs due to the speed of travel, convenience, and comfort.
- Ride-hailing serves as a complementary mode for commuter rail services (a 3% net increase in use). Ride-hailing serves as a substitutive mode of transportation for bus services (a 6% reduction) and light rail services (a 3% reduction).

The Chicago Department of Transportation (CDOT) also conducts research in the Chicago mobility and transportation options space. For more information on mobility and transportation topics, please refer to this recent research from CDOT. For example, CDOT has several initiatives in place to study and address congestion and traffic on Chicago roads, including the *Congestion Mitigation and Air Quality Improvement Program* (CMAQ). This federally funded program is designed to improve air quality and mitigate congestion.[68] CDOT also released a Strategic Plan comprised of four (4) key pillars: Access to Opportunity, Aligning Our Streets with Our Values, Streets Free from Violence, and a CDOT That Works. Goals of this plan include building safer streets, increasing access to opportunities in historically neglected neighborhoods, and expanding public transportation access.[69]

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[66] WBC. (2021, April). *Strong, Diversified Economy – Chicago's industry mix most closely matches the nation's, with no single industry employing more than 12% of the workforce.* World Business Chicago. http://www.worldbusinesschicago.com/economy/.
[67] McCall, V. (2020, April 30). Vivian. "*Chicago Cab Drivers Face 'Impossible Situation' During Pandemic*. WBEZ Chicago. http://www.wbez.org/stories/chicago-cab-chauffeurs-face-impossible-situation-during-pandemic/bcc7ea0f-a14a-4e68-a662-b170cf89e544.
[68] Chicago Metropolitan Agency for Planning. "*Congestion Mitigation and Air Quality Improvement Program.* https://www.cmap.illinois.gov/mobility/strategic-investment/cmaq.
[69] City of Chicago. *CDOT Strategic Plan*. https://www.chicago.gov/city/en/depts/cdot/supp_info/cdotstrategicplan.html

7b. Competition between PPVs and Public Transit

Chicago Transit Authority (CTA) research suggests that the steady increase in TNP trips beginning in 2014 may have resulted in CTA ridership loss. While ridership has decreased on Chicago public transportation, TNP trips have more than tripled since 2015, reaching 102.5 million TNP rides in 2018.[70]

The City of Chicago's 2019 report *Transportation Network Providers and Congestion in the City of Chicago* suggests that TNPs mainly compete with public transportation, walking, and biking as transportation options for passengers.[71] A 2018 CTA survey found that of customers who use TNPs, "48% would have taken CTA if TNPs did not exist, and 31% said they take TNPs more since riding CTA less."[72]

Nationwide, the University of California, Davis (UC Davis) study *Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States* found that ride sharing services resulted in overall reductions in Americans' usage of public transit.[73,74] The UC Davis Study reported the following:

- *"After using ride-hailing, the average net change in transit use is a 6% reduction among Americans in major cities.*
- *As compared with previous studies that have suggested shared mobility services complement transit services, we find that the substitutive versus complementary nature of ride-hailing varies greatly based on the type of transit service in question."*
- *Ride-hailing attracts Americans away from bus services (a 6% reduction) and light rail services (a 3% reduction).*
- *Ride-hailing serves as a complementary mode for commuter rail services (a 3% net increase in use).*
- *We find that 49% to 61% of ride-hailing trips would have not been made at all, or by walking, biking, or transit.*
- *Directionally, based on mode substitution and ride-hailing frequency of use data, we conclude that ride-hailing is currently likely to contribute to growth in vehicle miles traveled (VMT)"*

7c. Passenger Demand Over Time for TNPs and Taxicabs

Since their widespread adoption in Chicago in 2015, TNP use in the City has sharply increased at the same time as Taxicab trips have slowly declined, as seen in Figure 23 below. This graph also demonstrates that the TNP industry's growth in Chicago also resulted in an overall increase of trips in Chicago. TNPs may have converted some taxicab trips to TNP trips, but this data suggests that a notable portion of TNP trips following 2015 were new trips from passengers not served by taxicabs in the past.

Specifically, as shown below, prior to 2015, there were no more than 4 million taxi trips recorded in any year.

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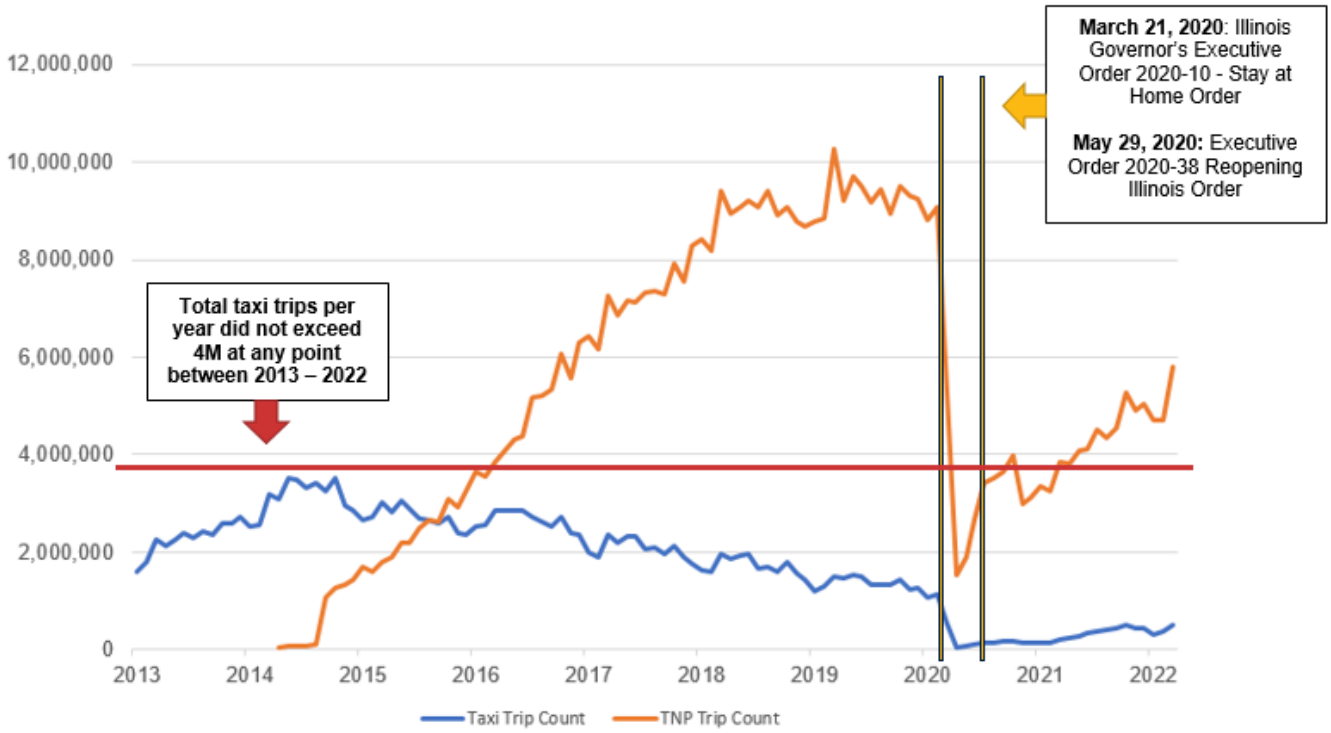
[70] City of Chicago. (2019, October 18). *Transportation Network Providers and Congestion in the City of Chicago.* https://www.chicago.gov/content/dam/city/depts/bacp/Outreach%20and%20Education/MLL_10-18-19_PR-TNP_Congestion_Report.pdf.
[71] City of Chicago. (2019, October 18). *Transportation Network Providers and Congestion in the City of Chicago.* https://www.chicago.gov/content/dam/city/depts/bacp/Outreach%20and%20Education/MLL_10-18-19_PR-TNP_Congestion_Report.pdf.
[72] City of Chicago. (2019, October 18). *Transportation Network Providers and Congestion in the City of Chicago.* https://www.chicago.gov/content/dam/city/depts/bacp/Outreach%20and%20Education/MLL_10-18-19_PR-TNP_Congestion_Report.pdf.
[73] Clewlow, R. R., & Mishra, G. S. (2017, October 1). *Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States.* UC Davis: Institute of Transportation Studies. https://escholarship.org/uc/item/82w2z91j.
[74] Study authors selected seven major metropolitan areas in the United States for their survey: Boston, Chicago, Los Angeles, New York, San Francisco/ Bay Area, Seattle, and Washington, D.C.

Figure 23: Taxicab and TNP Trips in Chicago (2013–2022) [75]



The impact of COVID-19 has been a significant decrease in the number of taxicab and TNP trips in the City of Chicago. The month immediately before the pandemic (February 2020), Chicago TNP chauffeurs provided approximately 9 million trips. In October 2020, Chicago TNP chauffeurs provided approximately 3.9 million trips.

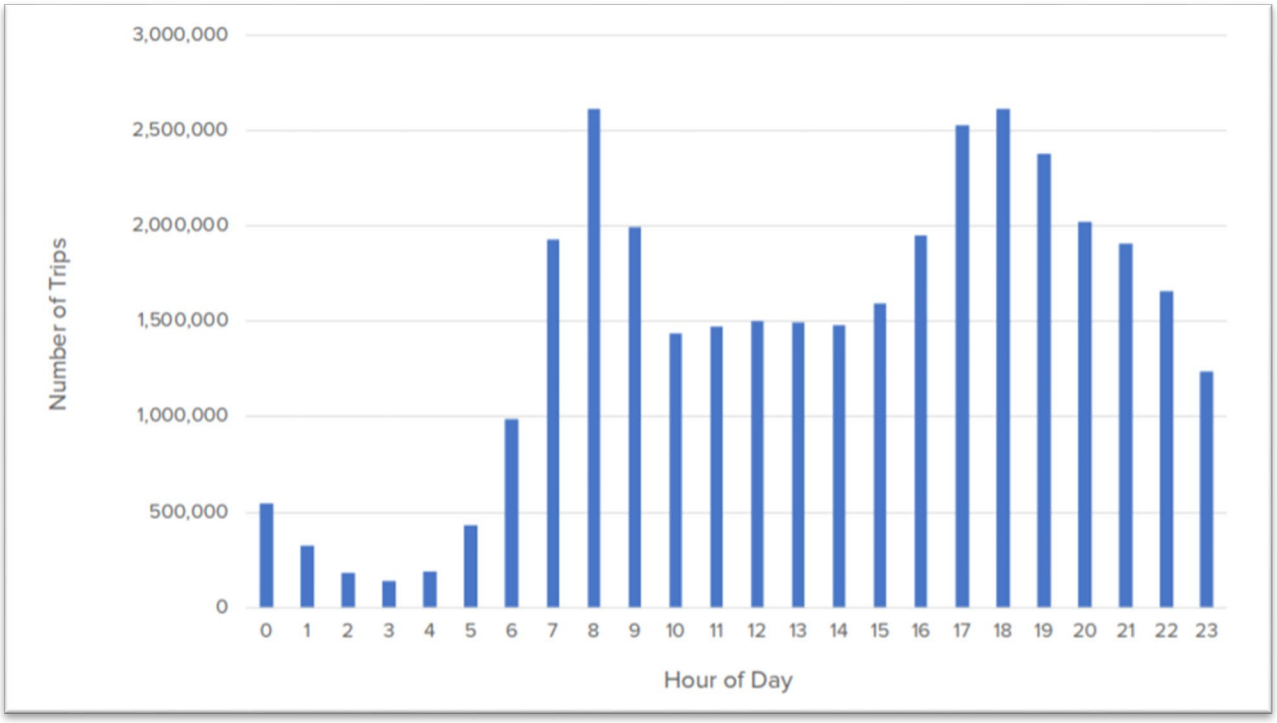
This correlates with the decrease in the number of TNP and taxicab chauffeurs active in the City in March 2020 and is consistent with other research about passengers. The Illinois Economic Policy Institute and University of Illinois Project for Middle Class Renewal found the number of TNP passengers fell by between 60% and 75% in the second quarter of 2020. [76]

[75] City of Chicago's internal *TNP Taxi Trip Dashboard* using industry data as of March 2022
[76] Manzo, F., and Bruno, R. (2021, January 19). *On-Demand Workers, Sub-Minimum Wages. Chicago*. Illinois Economic Policy Institute. https://illinoisepi.files.wordpress.com/2021/01/ilepi-pmcr-on-demand-workers-sub-minimum-wages-final.pdf.

7d. Popular Travel Times

The most popular travel times in Chicago are during the morning and evening rush hours. The hours beginning at 8am and 6pm see the highest number of TNP trips of any time of day. 61% of downtown area TNP trips on weekdays occur between 6am and 10pm.[77] See Figure 24.

Figure 24: Number of Weekday TNP Trips in Downtown Chicago Throughout the Day (2018)



This increase in the number of TNP trips during morning and evening rush hours highlights the importance of TNPs as a mode of transportation for passengers traveling to work. Schaller reported that on average, 20% of TNP trips in nine metro areas (Boston, Chicago, Washington DC, Los Angeles, Miami, New York, Philadelphia, San Francisco, and Seattle) are for traveling to work.[78] In addition to providing earnings opportunities for chauffeurs, PPVs support the Chicago economy by providing this transportation option for passengers to get to work.

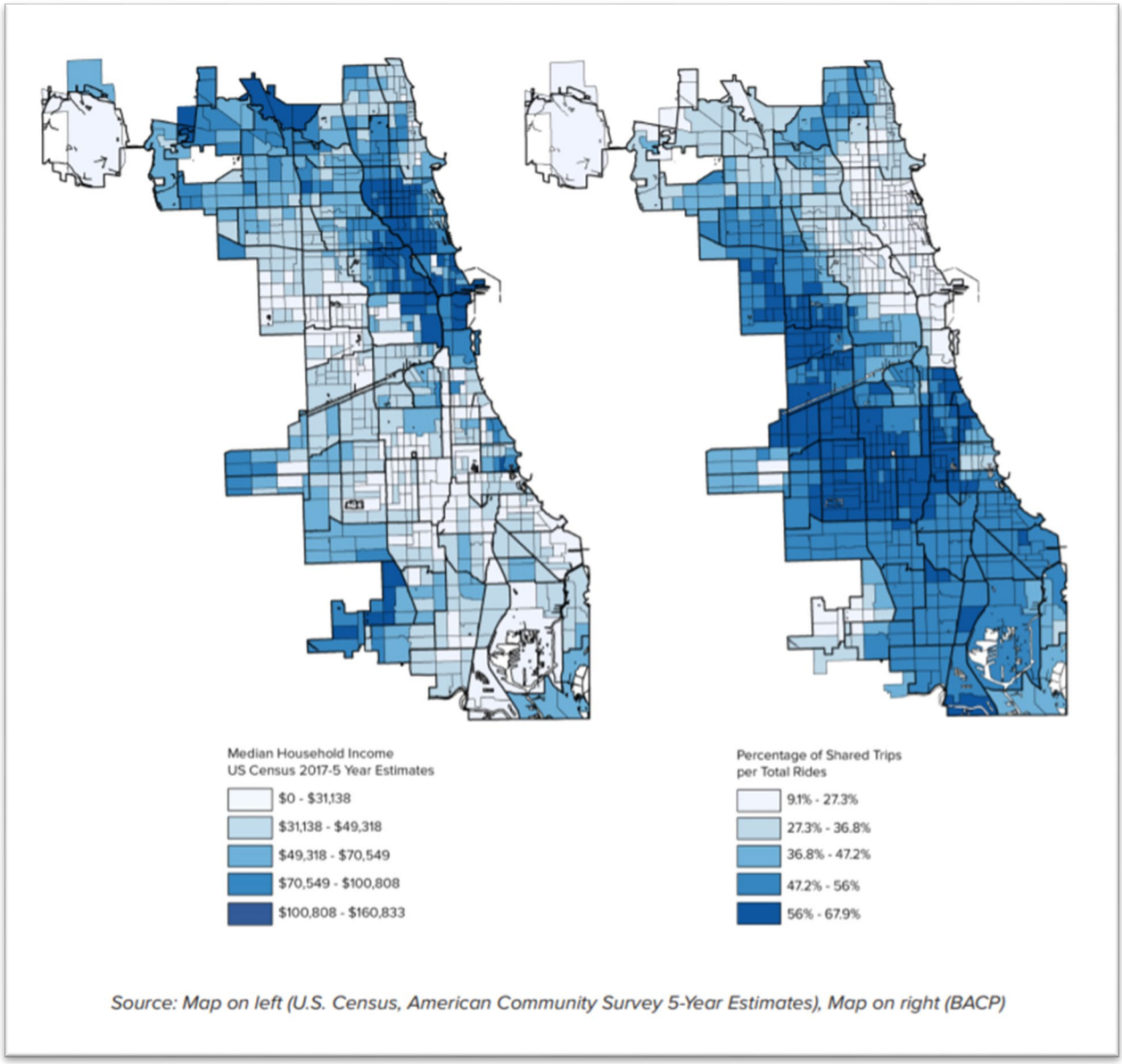
[77] City of Chicago. (2019, October 18). *Transportation Network Providers and Congestion in the City of Chicago*. https://www.chicago.gov/content/dam/city/depts/bacp/Outreach%20and%20Education/MLL_10-18-19_PR-TNP_Congestion_Report.pdf.
[78] Schaller, B. (2018, July 25). *The New Automobility: Lyft, Uber and the Future of American Cities.* New York City; Schaller Consulting. www.schallerconsult.com/rideservices/automobility.pdf.

7e. Demand for Individual versus Shared Trips

TNP passengers can typically request individual trips (for one or more passengers to be picked up at a single destination together and dropped off at a single destination together), or shared trips (in which riders are matched with others traveling in the same general direction to "share" the ride, often at a reduced cost). Note that due to the COVID-19 pandemic, most TNP companies suspended shared trip options during Spring 2020 to Fall 2021.

Notably, passengers with lower incomes tend to take more shared trips than individual trips. In Figure 25, the **map on the left** illustrates median household income; **darker blue indicates higher incomes**. The **map on the right** illustrates density of shared TNP trips; here, **darker blue indicates higher percentage of shared trips** as a portion of total TNP trips. **Figure 25 shows that there is an inverse relationship between household income and demand for shared trips.**

Figure 25: Median Household Income and Demand for Shared TNP Trips



Source: Map on left (U.S. Census, American Community Survey 5-Year Estimates), Map on right (BACP)

7f. Impact of PPVs on Passenger Car Ownership

Crowe reviewed existing research on the impact of PPV availability, particularly TNPs, as it relates to personal vehicle ownership. Research on this topic is conflicting, which may be related to varying geographies and study timeframes.

In 2016, researchers at the University of Michigan Transportation Research Institute, Texas A&M Transportation Institute and Columbia University surveyed over 1,200 people in Austin, Texas, to examine changes in individual transportation habits after Uber and Lyft suspended chauffeur operations following a change in Texas law.[79] Their study found that 41% of those surveyed reported using their own vehicle as a transportation replacement when Uber and Lyft operations left Austin.[80] 9% of individuals within their sample reported buying an additional car for this purpose. The study also reported that overall trips decreased after Uber and Lyft services in the area were suspended. The average monthly frequency decreased from 5.65 trips per person to 2.01 trips per person – a 68% decrease.[81]

A study conducted at the University of California, Davis's (UC Davis) Institute of Transportation Studies entitled Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States analyzed survey results across seven major U.S. cities, and found limited evidence that passengers chose to sell or otherwise get rid of their personal vehicle, opting instead to use rideshare services.[82] 91% of ride-hailing passengers reported that using rideshare did not change whether or not they own a vehicle. The majority of TNP passengers in the UC Davis sample still owned a personal vehicle; for those who did get rid of their personal vehicle, they increased their rideshare use.[83]

7g. Labor Market Considerations

The following section explores PPV labor market considerations, and includes the following key findings:

- The COVID-19 pandemic caused a substantial decrease in active* chauffeurs – decreasing to 28,642 TNP chauffeurs and 980 taxicab chauffeurs in October 2020
- The Chicago unemployment rate *increased,* and the number of active* chauffeurs *decreased* over roughly the same period during the COVID-19 pandemic, suggesting that notable numbers of unemployed or underemployed Chicagoans did not pursue PPV chauffeur earnings opportunities as a substitute for other lost wages.

The PPV industry provides earnings opportunities for thousands of Chicagoans. In January 2019, there were over 65,000 active* TNP chauffeurs and over 5,100 active* taxicab chauffeurs in the City. (The exact number of active livery chauffeurs was unknown.) This means that over 70,000 individuals were actively earning money by operating as chauffeurs in Chicago in January 2019.

The COVID-19 pandemic caused a substantial decrease in active* chauffeurs – decreasing to 28,642 TNP chauffeurs and 980 taxicab chauffeurs in October 2020. See Figures 26 and 27 below. In recent

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[79] Mekelburg, M. (2016, May 7). *Austin's Proposition 1 Defeated.* The Texas Tribune. https://www.texastribune.org/2016/05/07/early-voting-austin-proposition-against/.
[80] Hampshire, R. C., Simek, C., Fabusuyi, T., Di, X., & Chen, X. (2017, May 31). *Measuring the Impact of an Unanticipated Disruption of Ride-Sourcing in Austin, Texas.* SSRN Electronic Journal. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2977969.
[81] Hampshire, R. C., Simek, C., Fabusuyi, T., Di, X., & Chen, X. (2017, May 31). *Measuring the Impact of an Unanticipated Disruption of Ride-Sourcing in Austin, Texas.* SSRN Electronic Journal. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2977969.
[82] Clewlow, R. R., & Mishra, G. S. (2017, October 1). *Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States.* UC Davis: Institute of Transportation Studies. https://escholarship.org/uc/item/82w2z91j..
[83] Clewlow, R. R., & Mishra, G. S. (2017, October 1). *Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States.* UC Davis: Institute of Transportation Studies. https://escholarship.org/uc/item/82w2z91j.

months the numbers of active TNP and taxicab chauffeurs have continued to increase; however, the number of active TNP and taxicab chauffeurs remains below pre-pandemic levels.

As a point of comparison to local unemployment rates, the Chicago-Naperville-Arlington Heights unemployment reached 17.6% in April 2020, immediately after the start of the COVID-19 pandemic.[84] In December 2019, before the start of the COVID-19 pandemic, the Chicago-Naperville-Arlington Heights unemployment rate was 2.8%.[85] **Therefore, the Chicago unemployment rate *increased* and the number of active chauffeurs *decreased* over roughly the same period, suggesting that notable numbers of unemployed or underemployed Chicagoans did not pursue PPV chauffeur earnings opportunities as a substitute for other lost wages.**

This time period also coincided with a decrease in demand for PPV services across the City, suggesting that earnings opportunities might have been limited for individuals who sought to use chauffeur earnings opportunities to replace lost wages. For more information on chauffeur earnings and motivations, see ***Chauffeur Conditions and Effects on License Holders*** report.

Figure 26: Active (4+ Trips per Month) TNP Chauffeurs (2015–September 2021)

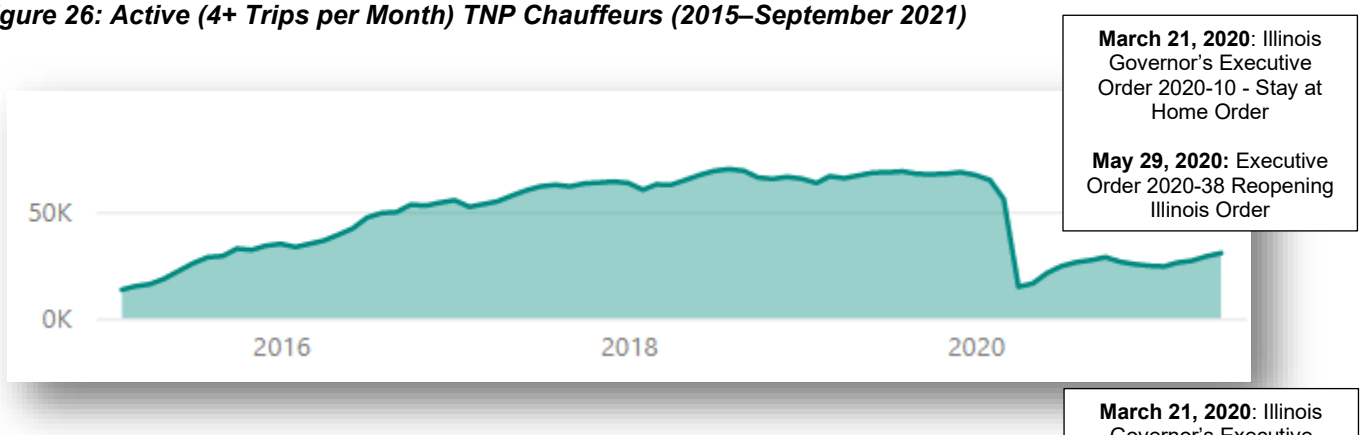
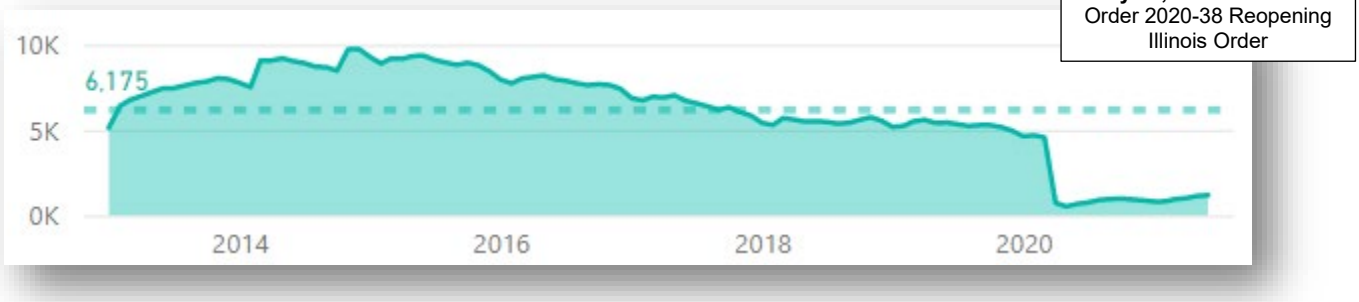


Figure 27: Active (4+ Trips per Month) Taxicab Chauffeurs (2014–September 2021)



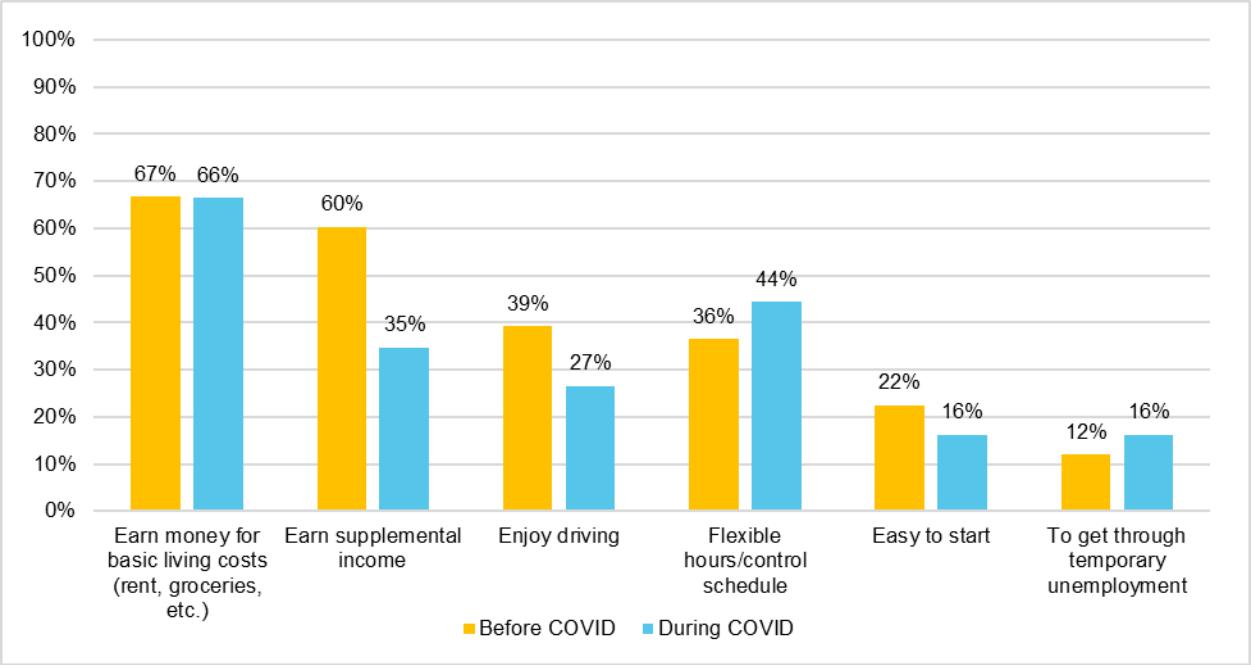
As discussed in more detail in the ***Chauffeur Conditions and Effects on License Holders*** report, the City and Crowe jointly conducted a Public Chauffeur Survey in early 2021. One area of the survey explored individual motivations behind choosing to operate as a chauffeur. Please see Figure 28 for the

* For these purposes, an "active" chauffeur is defined as one who provided four or more trips per month.
[84] Cisco, R., & Salustro, S. (2020, May 29). *Unemployment Rates Rise in all Metro Areas as COVID-19 Impacts Entire State.* Illinois Department of Employment Security Press Release. https://www.illinois.gov/news/press-release.21611.html
[85] Cisco, R., & Niederhofer, V. (2020, January 30). *Unemployment Rate Down in All Fourteen Metro Areas, Jobs Up in Ten.* Illinois Department of Employment Security Press Release. https://ides.illinois.gov/newsroom/2020/january/1-30-2020-unemployment-rate-do.html

breakdown of survey responses.

In the Public Chauffeur Survey, approximately 7,000 respondents were asked about reasons for operating as a chauffeur both before and during COVID-19, and they were able to select all responses that applied to them. The largest share of Public Chauffeur Survey respondents of all chauffeur types (livery, TNP, and taxicab) selected "earn money for basic living costs (rent, groceries, etc.)". The second most selected answer was "earn supplemental income."

Figure 28: Respondents' Reasons for Operating as a Chauffeur Before vs. During COVID



Notably, 12% of PPV chauffeurs reported in the PPV Chauffeur survey that they operated as a chauffeur at least in part "to get through temporary unemployment" before the COVID-19 pandemic. During the pandemic, this number increased to 16% operating at least in part "to get through temporary unemployment."

Most PPV chauffeurs and all TNP chauffeurs are considered independent contractors rather than employees. Independent contractors are not subject to the City's minimum hourly wage, nor are they required to receive non-monetary benefits such as paid time off or health insurance benefits.

Some PPV chauffeurs reportedly enjoy the flexibility and other intangible benefits of operating as chauffeurs. There is little start-up cost or effort required to operate as a TNP chauffeur, and some chauffeurs leverage TNP platforms to fill employment gaps or earn supplemental money outside of full-time positions. On the other hand, taxi and livery drivers, particularly those who own taxi medallions or taxi/livery vehicles, have substantial costs.

Please see ***Public Chauffer Survey Key Results Summary,*** provided under separate cover for a more complete discussion of chauffeur's self-reported motivations for operating as chauffeurs, perceptions of operating full-time versus part-time, expenses, and other conditions. For purposes of this report, it is important that PPVs provide opportunities for tens of thousands of people to earn money in the City.

7h. PPV Licensing Fees, Taxes, and Regulations Overview

Certain licensing fees, taxes, and regulations apply to the taxicab, TNP, and liveries industries; standards are not uniform across all industries. Please see Figure 29.

Figure 29: City of Chicago Licensing, Fees, Taxes, and Regulations

Licensing, Fees, Taxes, and Regulations	Taxicab Industry	TNP Industry	Livery Industry
License Fee	Yes	Yes	Yes
Ground Transportation Tax	Yes	Yes	Yes
Accessible Fund Fees	Yes	Yes	No
Public Vehicle Advertising Permits Required	Yes	Yes	Yes
Minimum Insurance Requirements	Yes	Yes	Yes
Driver Must be Licensed	Yes	Yes	Yes
Driver Background (Criminal & Driving History) Checks and Minimum Qualifications	Yes	Yes	Yes
Mandatory Vision Zero Safe Driving Training Curriculum	Yes	Yes	Yes
Drivers Required to Display Public Chauffeur Licenses	Yes	Yes	Yes
City of Chicago Outstanding Debt Check	Yes	Yes	Yes
Required Vehicle Inspections	Yes	Yes	Yes
Data Reporting Requirements	Yes	Yes	No
Wheelchair Accessible Vehicles Available	Yes	Yes	No
Enforcement - Citations Issued	Yes	Yes	Yes
Requirement to Post Signage: "Call 311 for Complaints & Compliments"	Yes	Yes	No
Passenger 311 Complaints Accepted & Processed	Yes	Yes	Yes
Event & Venue Based Traffic Management Restrictions Established by OEMC & CPD	Yes	Yes	Yes
Mandatory Airport Pick-Up Protocols	Yes	Yes	Yes
Dynamic Fare Pricing Permitted through mobile platform/app	Yes	Yes	Yes
Street-Hail Passenger Pick-Up Permitted	Yes	No	No
Using Dedicated Cab Stands	Yes	No	No

7i. PPV Revenues to the City

Figure 30 below includes ground transportation tax (GTT) and licensing fees generated by PPVs as revenue to the City.

Figure 30: TNP and Taxi Ground Transportation Tax (GTT) and Licensing Fee Payments[86]

Year	TNP		Taxi Medallion Licensees	
	GTT	Licensing Fees	GTT	Licensing Fees
2014-2015	$9,010,560	$67,485	$12,296,304	$9,279,486
YE 2016	$48,567,882	$1,111,558	$6,818,053	$4,384,325
YE 2017	$76,581,032	$1,713,209	$5,952,660	$4,204,250
YE 2018	$110,847,915	$2,075,209	$5,617,642	$3,645,500
YE 2019	$130,549,337	$2,236,627	$5,207,701	$3,638,750
YE 2020	$91,735,958	$1,001,019	$2,541,672	$1,410,375
Jan.-July 2021	$43,191,320	$449,951	$526,159	$486,625
Total	**$510,484,004**	**$8,655,058**	**$38,960,191**	**$27,049,311**

These revenues are illustrated in Figures 31 and 32 on the next page.

[86] BACP internal revenue data prepared in September 2021.

Figures 31 and 32 demonstrate the impact of the COVID-19 pandemic on PPV revenues to the City. For example, between 2019 and 2020, the Ground Transportation Tax (GTT) revenues generated by the TNP industry decreased 29.79%. The GTT revenues generated by the taxicab industry decreased by 51.9%.

Figure 31: TNP Company Revenues to the City in Millions of Dollars (2019–July 2021)

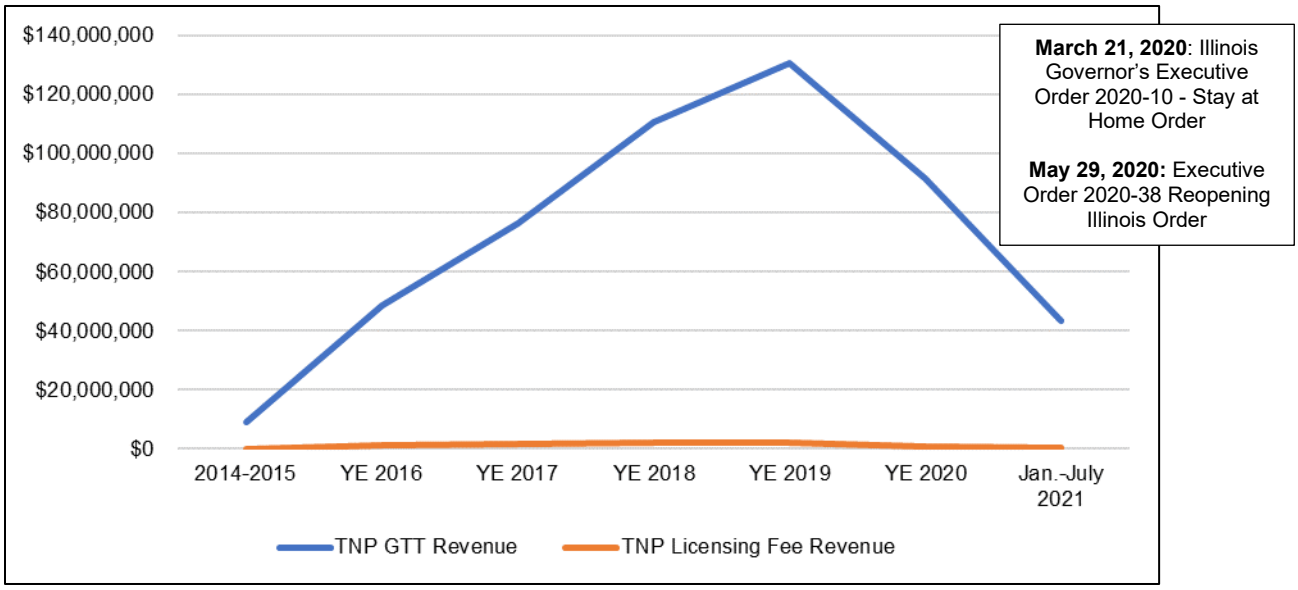
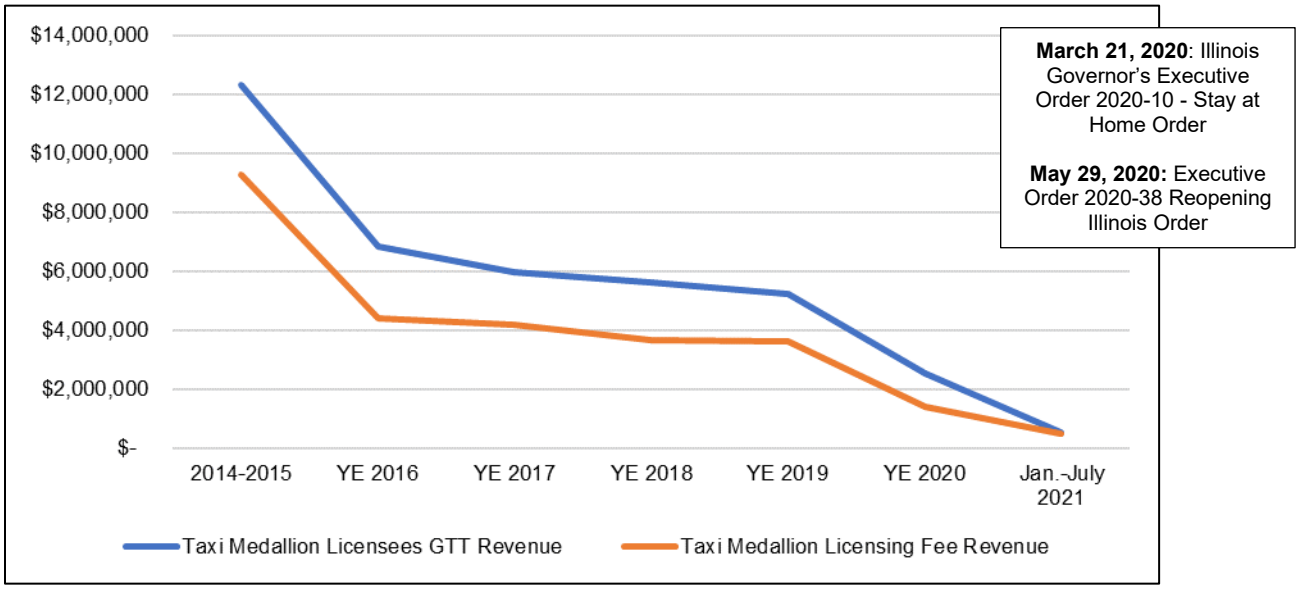


Figure 32: Taxi Company Revenues to the City in Millions of Dollars (2019–July 2021)



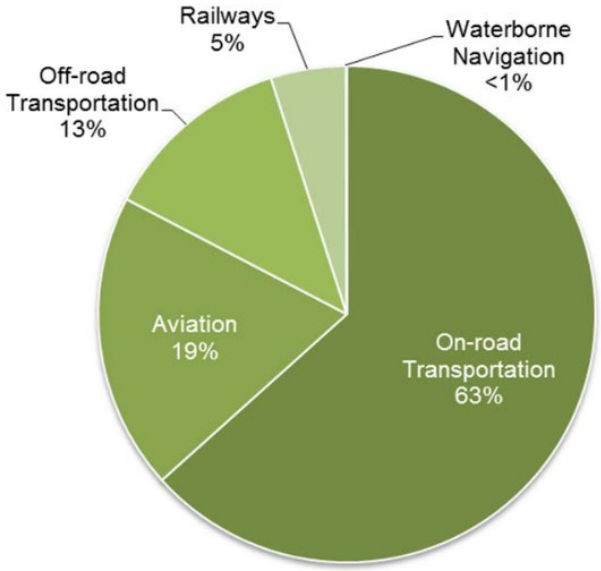
Traffic Congestion and the Environment

At the time this report was being finalized, the City of Chicago released its 2022 *Climate Action Plan* (Chicago.Gov/ClimateActionPlan), which aims to cut the city's carbon emissions 62% by 2040, reduce pollution burdens on communities, expand equitable infrastructure access, and promote community

health and resilience. The 2022 Climate Action Plan builds and expands upon the 2008 *Chicago Climate Action Plan* and the 2012 report *Sustainable Chicago 2015*.

Public Passenger Vehicles (PPVs) provide multiple transportation options for passengers; however, increased PPV use is also associated with increased congestion, pollution burden near roadways, and negative environmental impacts. The 2008 *Chicago Climate Action Plan* reported that 25% of greenhouse gas emissions in Chicago result from transportation sector emissions.[87] The majority of these transportation emissions are the result of on-road vehicles, including PPVs (63%). See Figure 33.

Figure 33: Sources of Transportation Industry Emissions[88]



To address these negative environmental impacts, the City has historically partnered with the U.S Department of Energy and groups like the Chicago Area Clean Cities Coalition to facilitate initiatives like the *Drive Clean Chicago Program*, a $14 million incentive program funded through the Chicago Department of Transportation with resources from the federal Congestion Mitigation Air Quality (CMAQ) program. The *Drive Clean Taxi Program* was one of three funds within the *Drive Clean Chicago Program* that provided approximately $1.3 million dollars for clean fuel taxis, including up to a $10,000 voucher for a vehicle conversion or the incremental cost of a new alternative fuel vehicle. Taxis and liveries were required to be licensed and in good standing with BACP to be eligible for this program.[89]

In the 2022 *Climate Action Plan*, the City outlined a strategic action to "support equitable electrification of ride-hail and taxi fleets by 2030." The City notes that federal funding and commitments from various PPV industry stakeholders will be helpful in electrifying public passenger vehicles. Further, the Climate Action Plan includes a goal to enable at least 2,500 new public passenger electric vehicle charging stations by 2035, "with priority given to low- and middle-income communities".[90]

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[87] City of Chicago (2008) Chicago Climate Action Plan, https://www.chicago.gov/city/en/progs/env/climateaction.html
[88] Graph from: City of Chicago (2008) Chicago Climate Action Plan, https://www.chicago.gov/city/en/progs/env/climateaction.html
[89] "Drive Clean Chicago: Home." *Drive Clean Chicago | Home*, www.drivecleanchicago.com/OurPrograms.aspx.
[90] City of Chicago (2022). Climate Action Plan. https://www.chicago.gov/city/en/progs/env/climateaction.html

8. Recommendations

The PPV industry is a significant part of the Chicago economy. By providing point-to-point, relatively on-demand transportation options for Chicago residents, workers, and visitors, PPVs represent an important source of consumer transportation choices. PPVs also provide a relatively flexible earnings opportunity for chauffeurs and are a revenue source for City operations. All of these factors make PPVs an important contributor to the Chicago economy.

At the same time, the variability within the PPV industry means it is critical for decision makers to consider the disparate stakeholder groups – and variable *individuals* within stakeholder groups – when considering any policy or administrative change. As discussed in a separate report (*Chauffeur Conditions and Effects on License Holders*), chauffeurs drive myriad different hours and have a wide range of earnings. Similarly, this report summarizes that passengers have infinite individual preferences, accessibility requirements, and resources. As with most public policy, there may be intended and unintended impacts associated with a policy change.

The City should determine if any policy changes are needed related to Chicago passengers or economic conditions, and carefully assess whether there may be unforeseen impacts to some stakeholders as a result of any potential change. Implementation of any policies or incentives to promote affordability will also require the City to first analyze the estimated budgetary, staffing, and other implications of such a program against other City transportation and economic priorities.

Below, we outline three potential actions the City may wish to consider.

1. Expand Data Collection and Implement an Annual Passenger Survey

The City may consider collecting additional PPV data to better understand PPV conditions for passengers. Specifically, the City may consider 1) requiring routine submission of service response data by start and end location by TNPs and taxis that use dispatch apps, and 2) livery chauffeur and trip data (including fares).

The City may also consider facilitating a brief annual passenger survey to better understand passenger needs and experiences. Survey questions may cover topics such as service availability, affordability, and accessibility; factors influencing passengers' transportation decisions; and passenger experiences with PPVs and chauffeurs. An annual survey would provide the City with insight into whether passengers' needs are being met – as well as historical trend information – so the City can consider program or policy changes to continue to protect Chicago consumers/passengers. We note that the Chicago Transit Authority and other regional transit systems frequently conduct passenger surveys; the City may wish to align a potential PPV passenger survey with the City's public transit survey.

2. Incentivize Cost-Efficiency to Promote Affordability for Passengers

During the 12-week City Data Study Period, the average cost of a taxicab trip ranged from $12.30 to $16.54, or the equivalent of 57-76 minutes of minimum wage work ($13.00[91]) for a passenger. The average cost of a TNP trip ranged from $8.53 to $15.57, or the equivalent of 39-72 minutes of minimum wage work.

This means a minimum wage earner can spend anywhere from almost 66% to more than 100% of an

[91] The Chicago Minimum Wage Ordinance (2014). Municipal Code of Chicago, Chapters 1 – 24. Chicago's minimum wage was $13.00/hour between 7/1/2019 and 6/30/2020, with provisions for annual increases.

hour's wages for an average TNP or taxicab trip. For these passengers, it may be difficult to afford TNP or taxi rides, and passengers may need to opt for less expensive, and less convenient or efficient, ways of traveling.

The City may consider policies and incentives to promote affordability, particularly for lower income passengers. To help with affordability, the City may consider ways to subsidize PPV fares, such as vouchers for passengers in lower income neighborhoods or areas less served by public transportation. Vouchers may be designed to discount TNP and/or taxi fares or may be designed to provide free or discounted travel between a passenger's home, work, or other location to the nearest public transit station.

We note that Uber, Lyft, taxi dispatch platforms, and several cities have created partnerships to help connect passengers to public transit. Many rideshare apps today embed public transit information for passengers to consider when planning their trips – including in Chicago. The City may wish to consider additional financial incentives to expand on these partnerships with a focus on equity and affordability.

3. Incentivize Chauffeurs to Operate in Underserved Areas to Promote Equitable Passenger Access

As discussed throughout this report, not all neighborhoods and passengers in the City of Chicago appear to have equitable access to PPVs. We have seen, for example, that the majority of TNP and taxicab trips occur on the north and northwest sides of the City. In addition, for the top ten underserved[92] community areas, median service response times ranged between 3 and 7 minutes; whereas in nine of the top ten most served[93] community areas, the median response time was only 2 minutes.

The City has various legislation and incentives to encourage chauffeurs to provide services for passengers that require wheelchair access. In addition, the City taxes TNP rides in a way that incentivizes fewer private (individual rider) TNP trips downtown during peak hours, with a lower tax rate for shared trips (multiple passengers) in other parts of the city.

The City may wish to consider additional financial incentives for taxicab and TNP chauffeurs that operate in underserved community areas. Similar to potential subsidies to offset passenger costs, it may be helpful to consider incentives for chauffeur companies and individual chauffeurs who are available to pick up passengers in underserved areas. Because TNP and taxi chauffeurs earn money based on passenger trips provided, they are most likely to seek passengers in community areas with high demand for trips. Subsidies for lower income passengers (see Recommendation 2) may help spur demand by reducing passenger costs, but lower income passengers will only be able to take (and pay for) TNP and taxi rides if chauffeurs are locally available and have reliable response times. Therefore, the City may consider incentives to encourage chauffeurs to operate in areas with unmet demand. Any such policy should be consistent with other ongoing transportation and equity related initiatives in the city, such as the *Equitable Transit-Oriented Development Policy Plan*, INVEST South/West Initiative, and guidance from the City's Office of Equity and Racial Justice.

Crowe again thanks the City of Chicago and all stakeholders who participated in this project by providing industry data and insights.

[92] Per the Public Passenger Vehicles Underserved Task Force, "underserved" community areas are those least often serviced by PPVs in Chicago.
[93] Per the Public Passenger Vehicles Underserved Task Force, "served" community areas are those most frequently serviced by PPVs in Chicago.

Appendix A: TNP Response Times by Community Area

Crowe analyzed PPV trip data (originally submitted by TNP companies in March of 2021) for one week per quarter from the first quarter of 2018 through the last quarter of 2020. Please see Figure 34 for exact dates for the City Data Study Period.

Figure 34: PPV City Data Study Period

Week	Week Beginning	Week Ending
1	12/31/2017	1/6/2018
2	4/1/2018	4/7/2018
3	7/1/2018	7/7/2018
4	10/1/2018	10/7/2018
5	12/31/2018	1/6/2019
6	4/1/2019	4/7/2019
7	7/1/2019	7/7/2019
8	10/1/2019	10/7/2019
9	12/31/2019	1/6/2020
10	4/1/2020	4/7/2020
11	7/1/2020	7/7/2020
12	10/1/2020	10/7/2020

Where available, Crowe used census tract data to associate TNP trips with Chicago's 77 defined community areas. Using this information, Crowe determined median and average service response time for all Chicago community areas, shown in Figure 36. Service response time was defined as the difference between when a passenger requested a TNP ride and when the passenger trip was initiated by the TNP chauffeur.

Figure 35: Service Response Times by Chicago Community Area

Community Area *(sorted from longest to shortest Median Response Time)*	**Median Service Response Time**	**Average Service Response Time**
East Side	7	7
Garfield Ridge	7	6
Hegewisch	7	8
O'Hare	7	7
Riverdale	6	6
Ashburn	5	5
Burnside	5	5
Chicago Lawn	5	5
Clearing	5	5
Pullman	5	5
South Deering	5	6
West Pullman	5	5
Archer Heights	4	4
Auburn Gresham	4	4
Austin	4	4
Avalon Park	4	4
Belmont Cragin	4	4
Beverly	4	4
Brighton Park	4	4

Community Area *(sorted from longest to shortest Median Response Time)*	**Median Service Response Time**	**Average Service Response Time**
Calumet Heights	4	4
Chatham	4	4
East Garfield Park	4	4
Englewood	4	4
Gage Park	4	4
Greater Grand Crossing	4	4
Hermosa	4	4
McKinley Park	4	4
Montclare	4	4
Morgan Park	4	5
Mount Greenwood	4	4
New City	4	4
North Lawndale	4	4
Roseland	4	5
South Chicago	4	5
South Lawndale	4	4
South Shore	4	4
Washington Heights	4	4
West Elsdon	4	4
West Englewood	4	4
West Garfield Park	4	4
West Lawn	4	5
Albany Park	3	3
Armour Square	3	3
Bridgeport	3	3
Douglas	3	3
Dunning	3	4
Edison Park	3	3
Forest Glen	3	3
Fuller Park	3	4
Grand Boulevard	3	3
Humboldt Park	3	4
Irving Park	3	3
Jefferson Park	3	3
Kenwood	3	3
Lower West Side	3	3
North Park	3	3
Norwood Park	3	3
Oakland	3	4
Portage Park	3	3
Washington Park	3	4
West Ridge	3	3
Woodlawn	3	4
Avondale	2	3
Edgewater	2	2
Hyde Park	2	3
Lincoln Square	2	2
Logan Square	2	2
Loop	2	2

Community Area *(sorted from longest to shortest Median Response Time)*	**Median Service Response Time**	**Average Service Response Time**
Near South Side	2	2
Near West Side	2	2
North Center	2	2
Rogers Park	2	3
Uptown	2	2
West Town	2	2
Lake View	1	2
Lincoln Park	1	2
Near North Side	1	2

City of Chicago

Department of Business Affairs and Consumer Protection (BACP)

Public Passenger Vehicle (PPV) Study

Public Chauffeur Survey Results Summary

August 19, 2022

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1. Public Chauffeur Survey Overview

The City of Chicago (City) Department of Business Affairs and Consumer Protection (BACP) initiated the City's Public Passenger Vehicle (PPV) Study in 2020. The City conducted a competitive procurement and awarded a contract to Crowe LLP (Crowe) to prepare the study. The purpose of the PPV Study was to evaluate the current state of the public passenger vehicle industry in the City of Chicago. The primary goal was to provide the City with data-driven analysis of current conditions, based on available data. Based on analysis, this report also identified potential policy options and action steps for the City to consider in meeting transportation and economic goals.

As part of the PPV Study, the City and Crowe developed and administered an anonymous online survey that was distributed to Chicago licensed taxi, livery, and TNP chauffeurs licensed/active as of March 2021. The goal of the **Public Chauffeur Survey** was to gather first-hand accounts, data, and input from PPV chauffeurs on existing conditions.

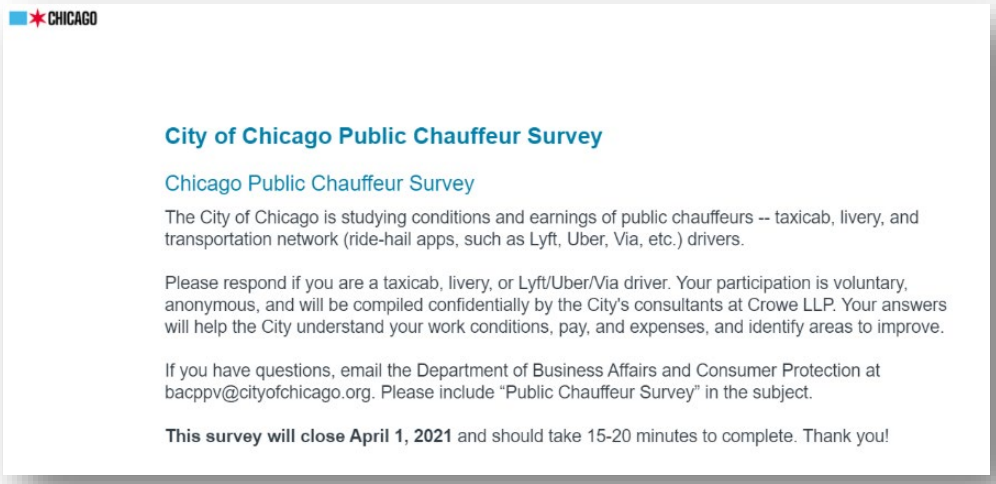
This ***Public Chauffeur Survey Results Summary*** **was** developed as a supporting document for the PPV Study. It supports the two primary PPV Study reports:

1. ***Chauffeur Conditions and Effects on License Holders Report***
2. ***Effects on Passengers & the Chicago Economy Report***

The City provided stakeholder representatives, including TNP and taxi chauffeurs, an opportunity to deliver feedback on the first draft of the Public Chauffeur Survey, and the City and Crowe incorporated stakeholder feedback before finalizing the survey structure and specific questions. The final Public Chauffeur Survey contained 50 questions and covered topics including chauffeur demographic information, estimated take-home earnings and expenses, preferred times to operate as a chauffeur, PPV industry concerns, and other comments. The Public Chauffeur Survey was open for responses for over three weeks (March 10 – April 1, 2021).

BACP posted the survey link publicly on March 9 and conducted a direct-email campaign. In addition to outreach efforts across all BACP social media platforms, BACP contacted chauffeur advocacy groups, taxicab companies, TNP companies, all 50 aldermanic ward offices, and Neighborhood Business Development Centers to promote the survey.

Over 7,000 survey responses were submitted before the April 1 deadline. The PPV Study used survey results to answer certain questions of interest to the City where PPV industry data were not available.


CHICAGO

City of Chicago Public Chauffeur Survey

Chicago Public Chauffeur Survey

The City of Chicago is studying conditions and earnings of public chauffeurs -- taxicab, livery, and transportation network (ride-hail apps, such as Lyft, Uber, Via, etc.) drivers.

Please respond if you are a taxicab, livery, or Lyft/Uber/Via driver. Your participation is voluntary, anonymous, and will be compiled confidentially by the City's consultants at Crowe LLP. Your answers will help the City understand your work conditions, pay, and expenses, and identify areas to improve.

If you have questions, email the Department of Business Affairs and Consumer Protection at bacppv@cityofchicago.org. Please include "Public Chauffeur Survey" in the subject.

This survey will close April 1, 2021 and should take 15-20 minutes to complete. Thank you!

Note Regarding the COVID-19 Pandemic

This Public Chauffeur Survey was conducted during calendar year 2021, coinciding with the global health pandemic and significant economic disruption surrounding COVID-19. As with most industries, the pandemic and various public health orders severely disrupted the PPV industry. This impacted all aspects of chauffeur conditions and services – including the level of chauffeur supply, demand for PPV services, costs of services, chauffeur earnings, chauffeur health and safety, and other contextual and economic factors. It has also affected passenger travel needs and preferences.

Given the shifting conditions and economic uncertainty at the time of the PPV Study publication, we note that key results (including results from Public Chauffeur Survey) are likely to evolve in the short- and long-term, as PPV supply, demand, and other economic, social, and public health factors continue to shift. It may be useful to reconsider key analyses with updated data from subsequent calendar years.

Note

Because these services did not constitute an audit, review, or examination in accordance with standards established by the American Institute of Certified Public Accountants, we are not expressing an opinion on the underlying data provided to support our analysis. Data provided for our analysis was provided by the City of Chicago and was obtained by the City from various sources. We performed analysis on the data provided as described in our report. We have no obligation to perform any services beyond those described in our report. If we were to perform additional services, other matters might come to our attention that may affect our analysis and related conclusions. We make no representations as to the adequacy of these services for the City's purposes.

Our services and work product are intended for the benefit and use of the City of Chicago. This engagement was not planned or conducted in contemplation of reliance by any other party and is not intended to benefit or influence any other party. Therefore, items of possible interest to a third party may not be specifically addressed or matters may exist that could be assessed differently by a third party.

Crowe thanks the City of Chicago and all stakeholders who participated in this project, including the over 7,000 individuals who completed the Public Chauffeur Survey.

2. Definitions

Crowe recognize that various entities may refer to certain PPV industry terms differently. The PPV Study utilizes the following definitions:

- **License holders** are companies or individuals that manage and operate the business and vehicles performing chauffeur driven transportation for hire for passengers. License holders include taxicab medallion license holders, TNP companies (Uber/Lyft), and livery companies.

- **Liveries,** including limousines and town cars, are licensed public passenger vehicles that charge a rate of fare which is not based on a meter. livery rides and fares must be prearranged. livery rides may not be street hailed or secured in cab stands. Liveries are most used by business travelers; but, also for special events, such as weddings and proms. The Chicago livery companies engage livery chauffeurs as employees or independent contractors.

- **Public Chauffeurs** are individuals who operate a public passenger vehicle (PPV) in the City of Chicago. Public chauffeurs include those individuals who operate taxicabs, TNPs, livery, pedicab, and charter and sight-seeing buses. The scope of this assessment was limited to taxicab, TNP, and livery drivers.

- A **Public Chauffeur's License** is the license required by the City of Chicago and issued by BACP for a PPV chauffeur to operate with passengers in the City of Chicago**.** Chauffeurs also require a valid driver's license to operate and have minimum qualifications.

- **Public Passenger Vehicles (PPVs)** are for-hire vehicles including taxicabs, TNPs, liveries, pedicabs, charter and sight-seeing buses, private ambulances, water taxis and tour boats. The scope of this assessment was limited to taxicabs, TNPs, and liveries.

- **Taxicabs** are defined as a vehicle licensed for hire at fare rates set by the City and recorded by a taximeter. A taxi may be hailed by customers on the street or prearranged via phone call to the taxicab company or through a taxicab dispatch app, such as Curb or Arro. Historically, taxicab use has primarily been through real-time hailing by customers on the street. Taxis are driven by licensed public chauffeurs. A medallion is a metal plate affixed to the hood of the taxicab vehicle indicating the vehicle is a licensed City of Chicago taxicab.

- **Transportation Network Providers** (TNPs) provide and maintain a digital platform (smart phone application or app) to connect passengers with chauffeurs and vehicles for compensation. TNPs are commonly referred to as "rideshare" or "ride hail" companies and, in some jurisdictions, as Transportation Network Companies (TNCs). This report relies on data from Uber and Lyft from the City Data Study Period. A Chicago TNP chauffeur and vehicle must be affiliated with a licensed TNP company and available only thru affiliated TNP company's platform. A TNP chauffeur and vehicle may be affiliated with multiple TNP companies. TNP chauffeurs operate as independent contractors on affiliated TNP company platforms.

3. Public Chauffeur Survey Key Results

The following section summarize results of the Public Chauffeur Survey administered in March 2021.

Length of Time Operating as a Chauffeur

The Public Chauffeur Survey analyzed self-reported chauffeur tenure. The percentage breakdown of all survey responses is shown in Figure 1.

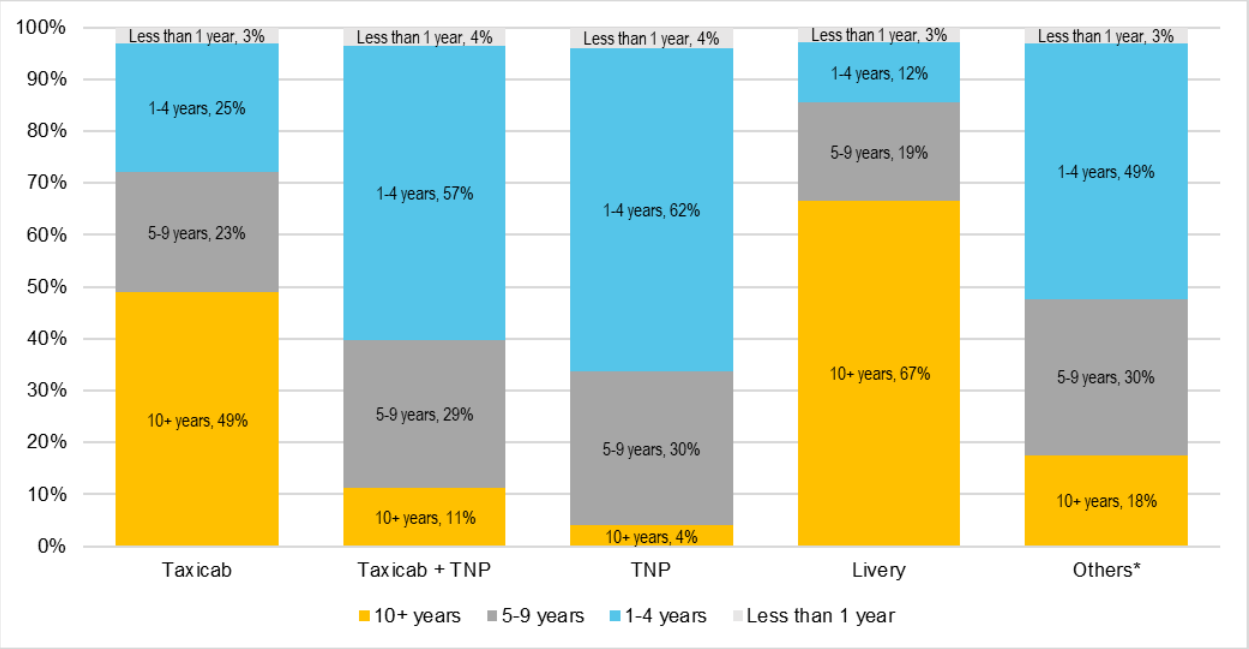
Figure 1: Respondents' Length of Time Operating as a Chauffeur

Tenure as a Chauffeur	Percentage of Public Chauffeur Survey Respondents[1]
10+ years	14%
1-4 years	52%
5-9 years	25%
Less than 1 year	8%
Total	100%

Percentages are rounded and may not equal 100%.

Crowe observed some variations across PPV types. Livery and taxicab respondents both reported the largest share of chauffeurs (67% and 49% respectively) who self-reported operating for 10+ years; the taxicab + TNP (57%), TNP (62%), and the Others* (49%) respondent groups reported the largest share of chauffeurs within the 1–4-year range. See Figure 2.

Figure 2: Respondents' Length of Time Operating as a Chauffeur by PPV Type[2]



Percentages are rounded and may not equal 100%.
*Other chauffeur combinations: taxicab + livery; TNP + livery; and taxicab +TNP + livery

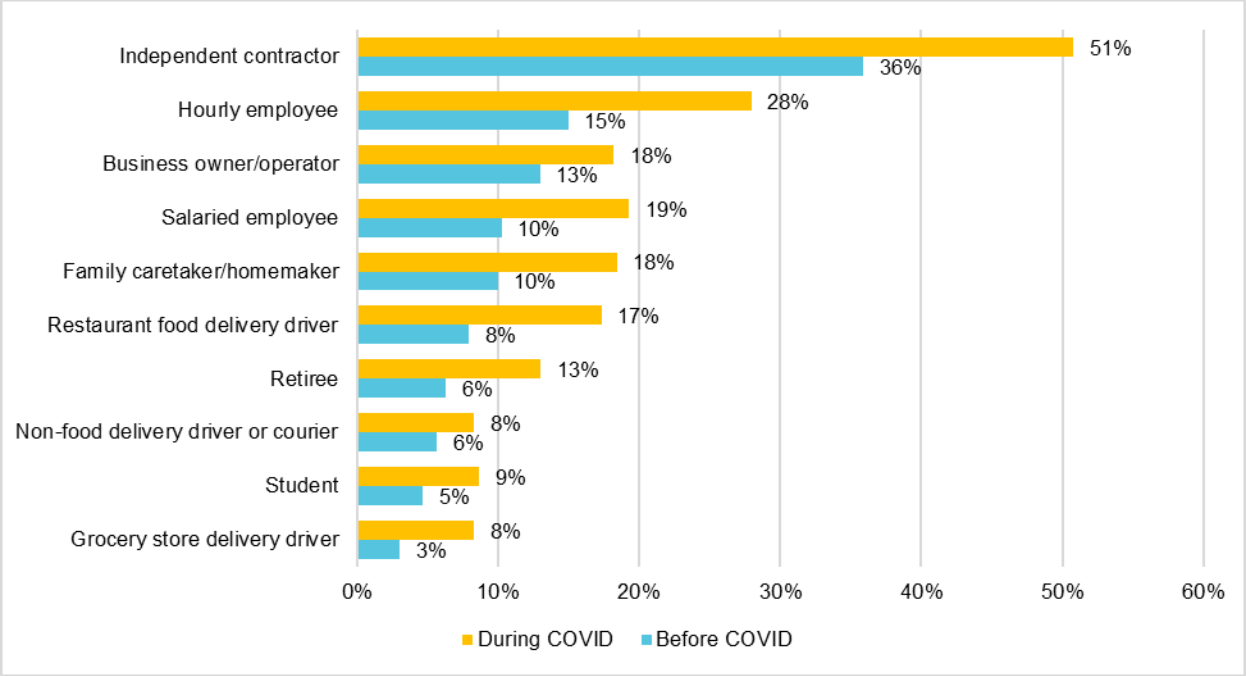
[1] Percentage breakdown is based on respondents who answered this survey question.

[2] Crowe note that TNP respondents may have inaccurately answered or misestimated their tenure, as the TNP industry in Chicago has only existed since 2014 (approximately 7 years).

Across taxicab, TNP, and livery chauffeurs, a small percentage (3-4%) operated for less than one year. Similar shares of respondents reported operating as a chauffeur for between 5-9 years, with 23% of taxicab, 29% of taxicab + TNP, 30% of TNP, 19% of livery, and 30% of Others* category respondents selecting this answer choice.

Respondents were also asked to answer the question "What else described you?" before COVID and during COVID. See Figure 3. Note that within the Public Chauffeur Survey, fewer respondents answered questions specific to "during COVID" as compared to "before COVID." Throughout this report the City and Crowe share results for "before COVID" and "during COVID," but these categories are not directly comparable.

Figure 3: Responses to "What Else Describes You?"



Improvements to Chauffeur Conditions

The Public Chauffeur Survey asked respondents select up to three (3) answers when asked "What Would Most Improve Chauffeur Conditions?" The percentage breakdown of survey responses is shown in Figures 4-7.

Figure 4: What Would Most Improve Chauffeur Conditions?

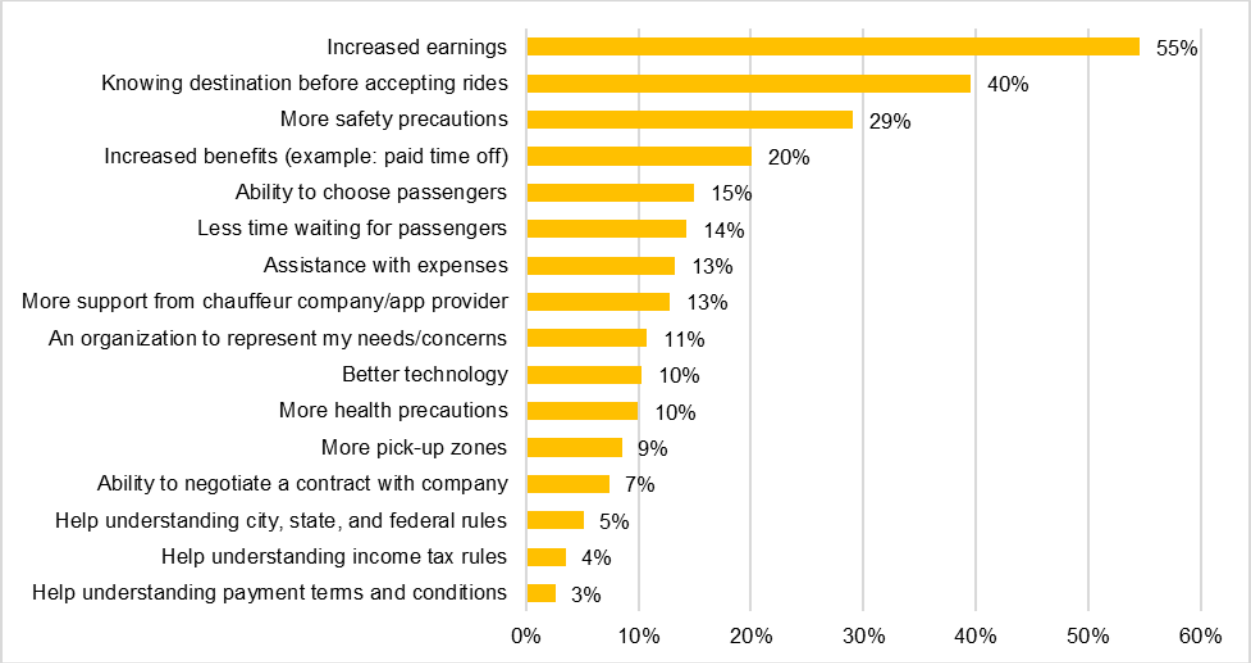


Figure 5: What Would Most Improve Chauffeur Conditions? [Taxicab Respondents]

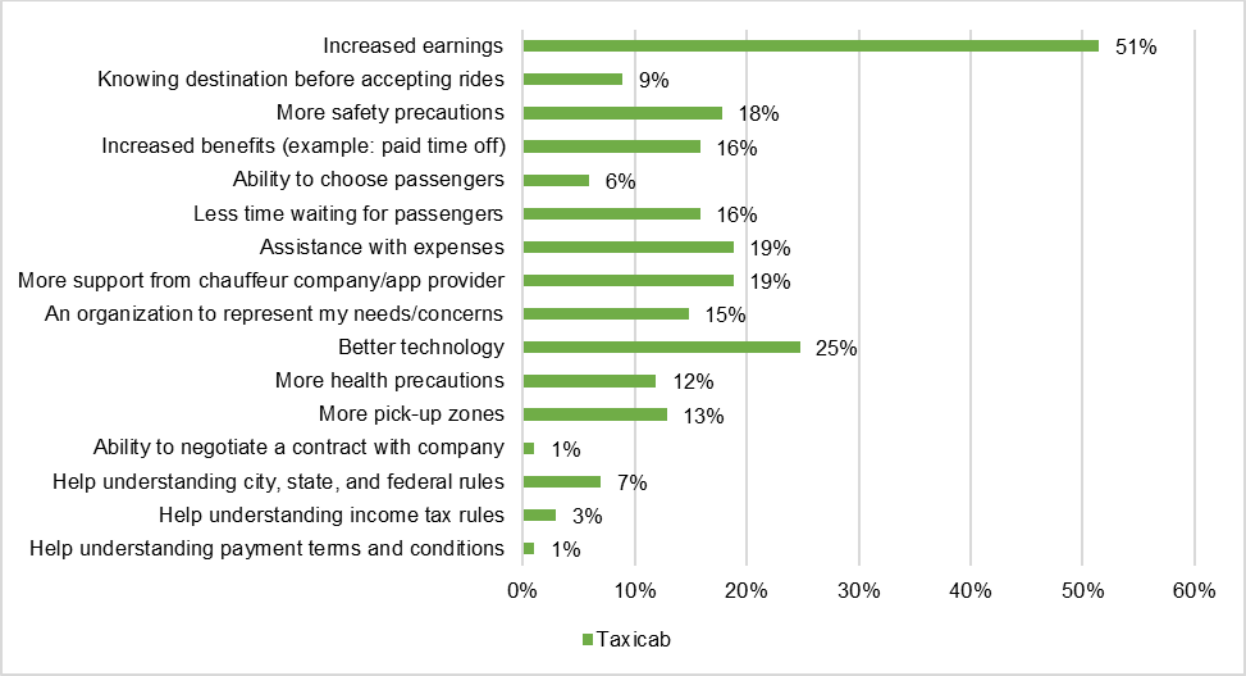


Figure 6: What Would Most Improve Chauffeur Conditions? [TNP Respondents]

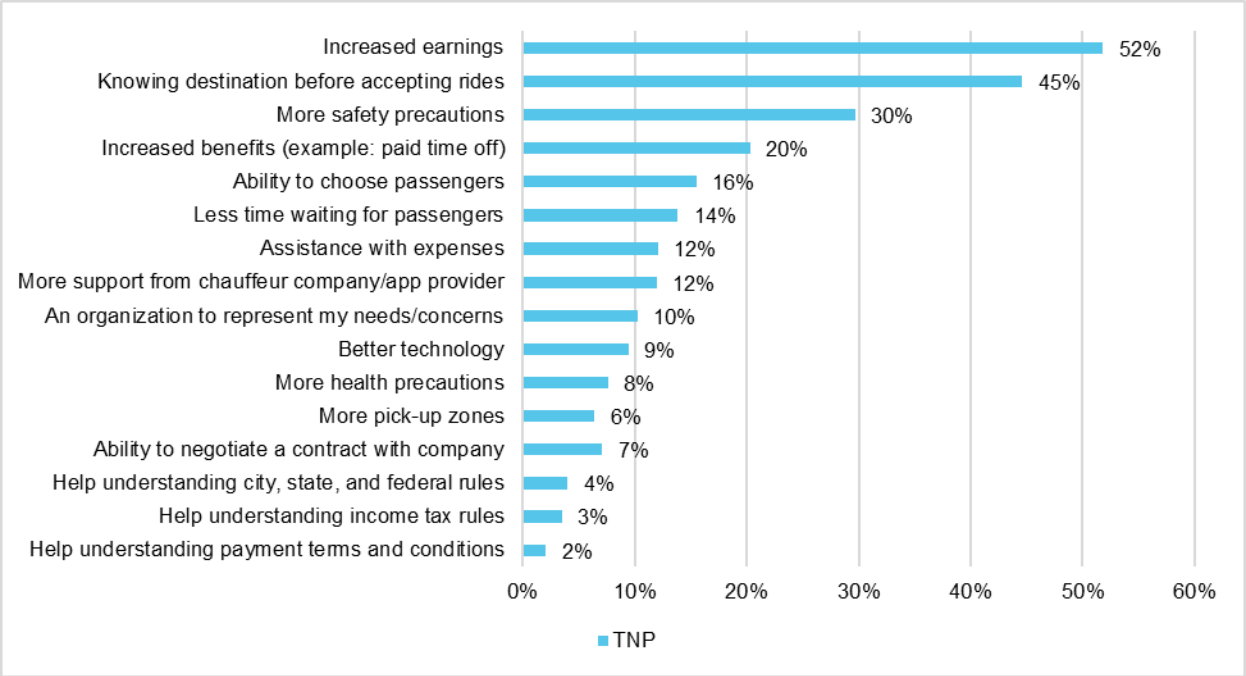
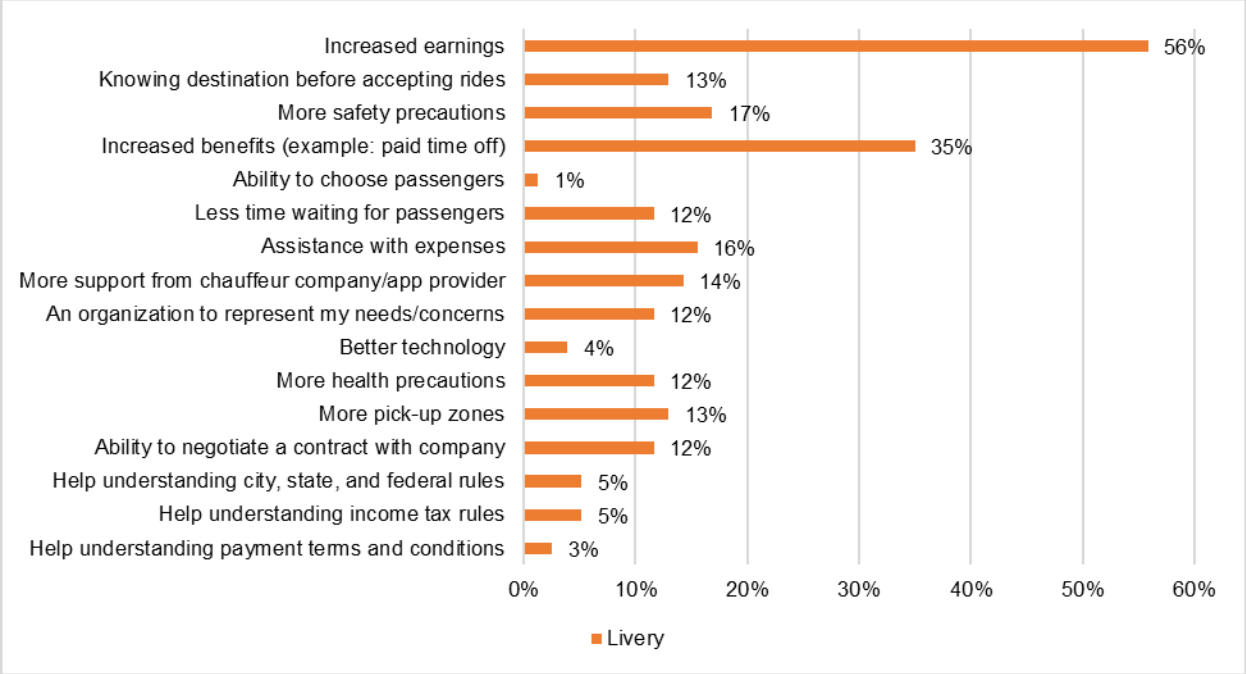


Figure 7: What Would Most Improve Chauffeur Conditions [Livery Respondents]



Chauffeur Health and Safety Concerns

The Public Chauffeur Survey asked respondents about various topics related to health and safety. Please see select survey responses below in Figures 8-9.

Figure 8: Respondents With / Without Health Insurance

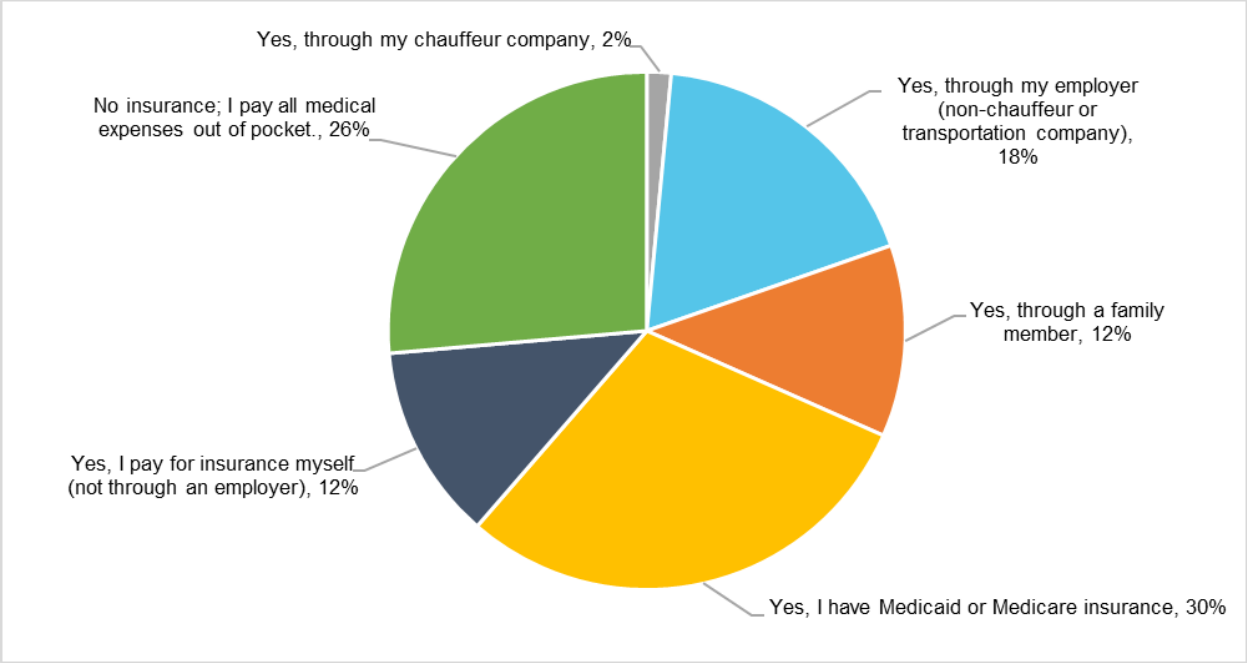
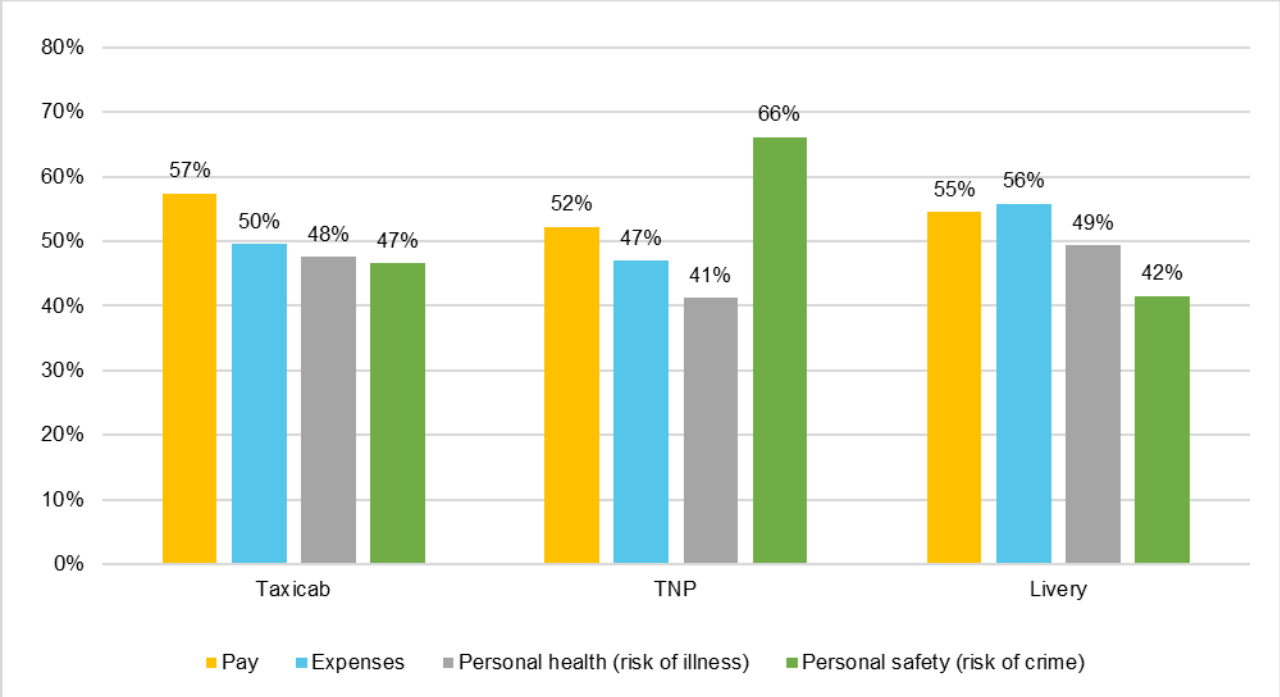


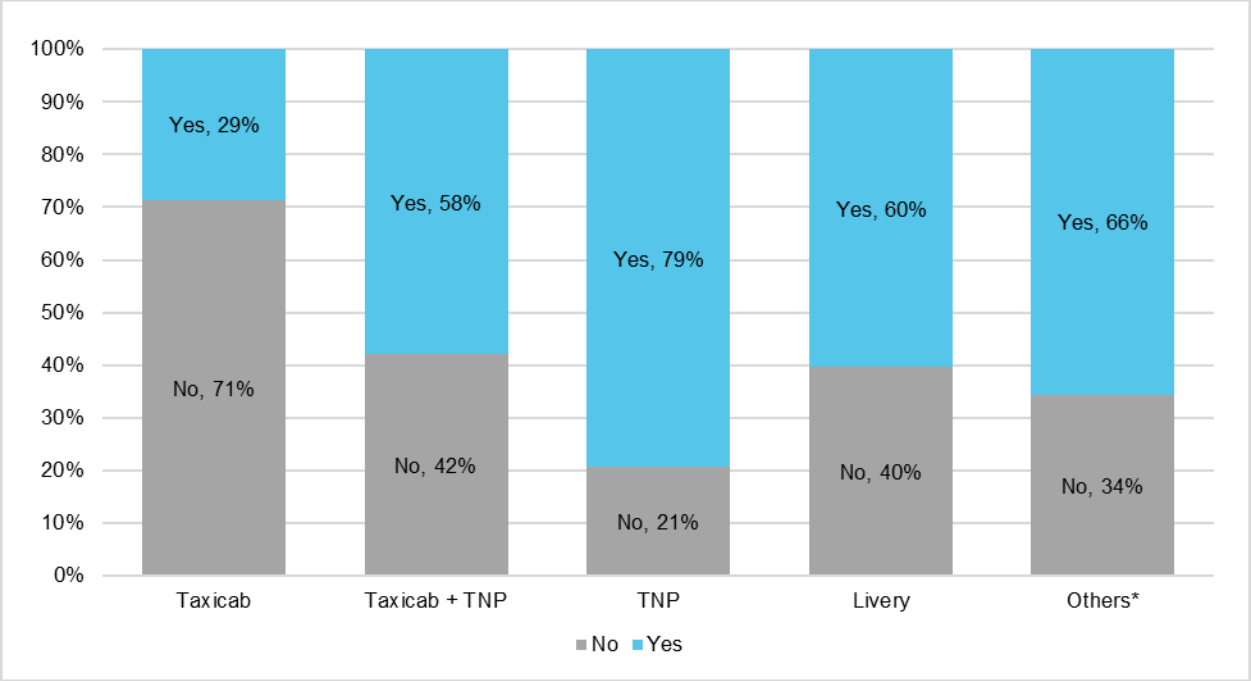
Figure 9: Respondents' Concerns About Continuing to Operate as a Chauffeur Post-COVID



Impacts of COVID-19 on Chauffeurs

The Public Chauffeur Survey asked respondents about the impact of COVID-19 on personal health and other chauffeur conditions. Please see select survey responses below in Figure 10.

Figure 10: Respondents Who Contracted or Were Exposed to COVID-19 by Chauffeur Type



*Other chauffeur combinations: taxicab + livery; TNP + livery; and taxicab +TNP + livery

During the COVID-19 pandemic months of April – December 2020, only 57% of Public Chauffeur Survey respondents reported operating during the COVID-19 pandemic, with the share of chauffeurs who did not operate during COVID-19 rising to 43%. This analysis suggests that some chauffeurs chose not to operate during COVID-19 due to health and/or safety concerns or limited economic opportunities due to decreased rider demand. See Figures 11-12.

Figure 11: Respondents Who Operated Before COVID vs. During COVID[3]

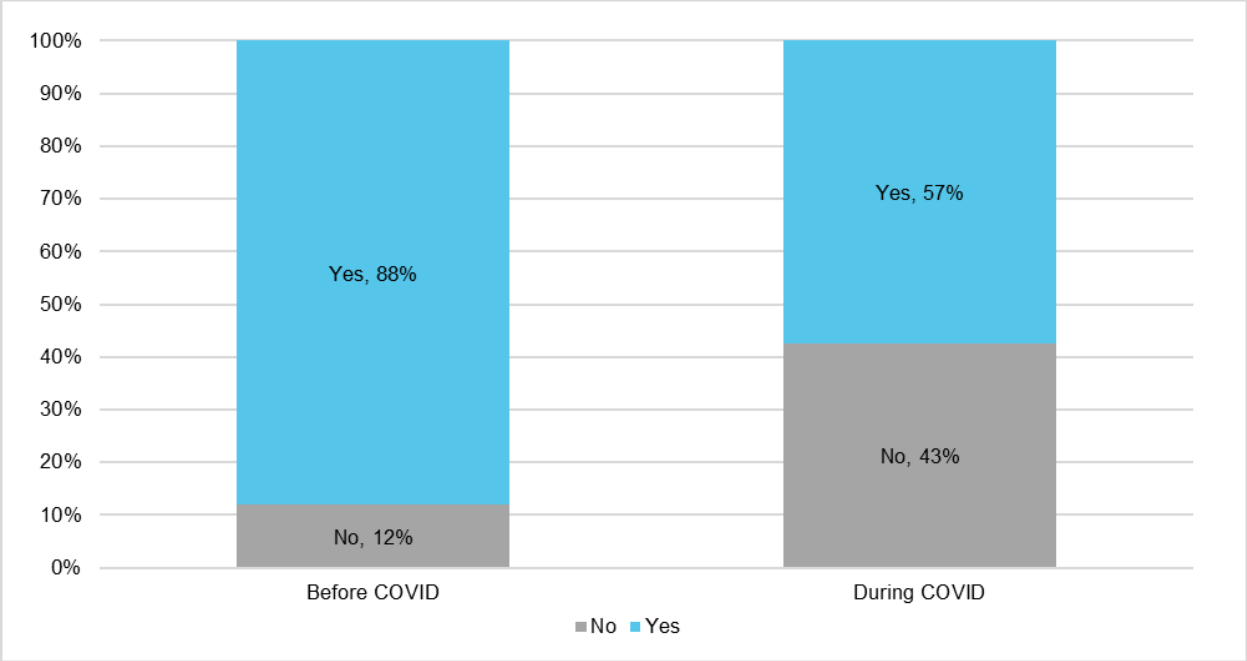


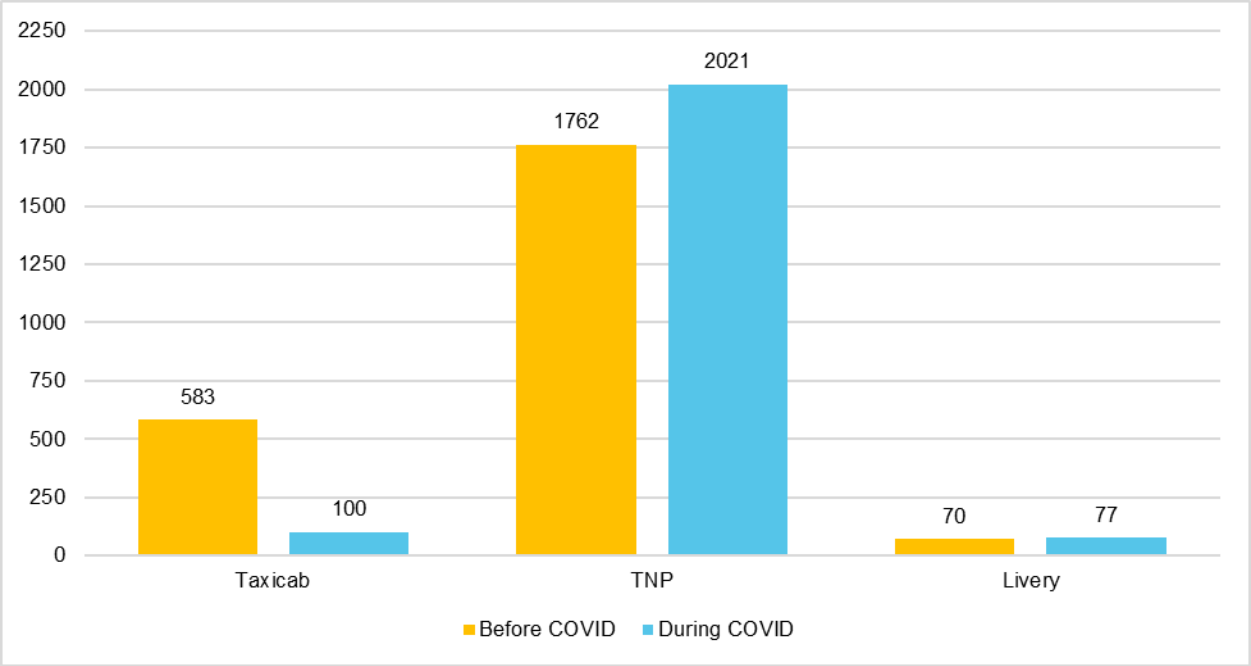
Figure 12: Change in Number of Respondents Who Operated Before vs. During COVID

Public Chauffeur Survey Question	Yes	No	Total
In 2019 (before COVID), did you operate as a taxicab, livery, or Lyft/Uber/Via chauffeur?	5,677	770	**6,447**
Were you a taxicab, livery, or Lyft/Uber/Via chauffeur during COVID?	2,562	1,897	**4,459**

[3] Survey inquired about chauffeur participation and conditions in 2019 (before COVID) and April-December 2020 (during COVID)

When examining these results by PPV chauffeur type, we observed an increase in the number of respondents who reported operating as a TNP chauffeur during COVID, a slight increase in the number of livery chauffeurs operating during COVID, and a decrease in the number of chauffeurs who operated as a taxicab chauffeur during COVID as compared to before COVID. See Figure 13. While the survey data do not provide specific reasons, plausible explanations for the various changes *may* include overall chauffeur caution or concern about operating during the COVID-10 pandemic, and the ability of TNP chauffeurs to quickly enter the rideshare market to offset lost income from other sources during the economic recession. This is consistent with the increase in survey respondents who selected "earning money for basic living costs" as a reason for operating during the pandemic; please see Figure 25.

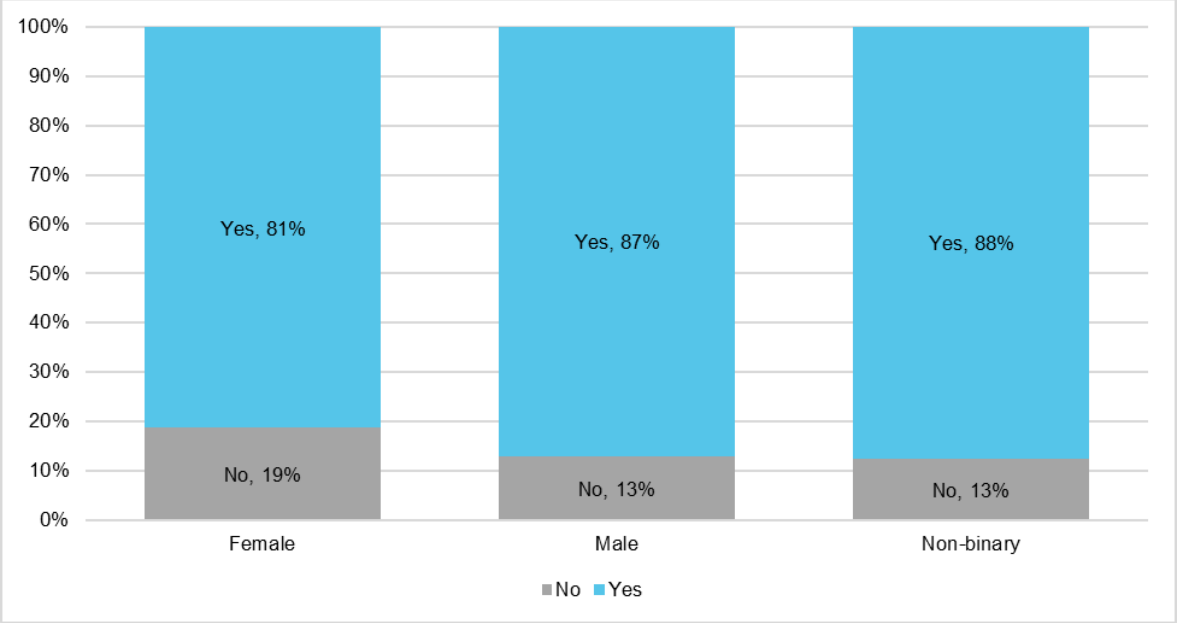
Figure 13: Number of Respondents Who Operated Before vs. During COVID by Chauffeur Type



Variation in Results by Gender

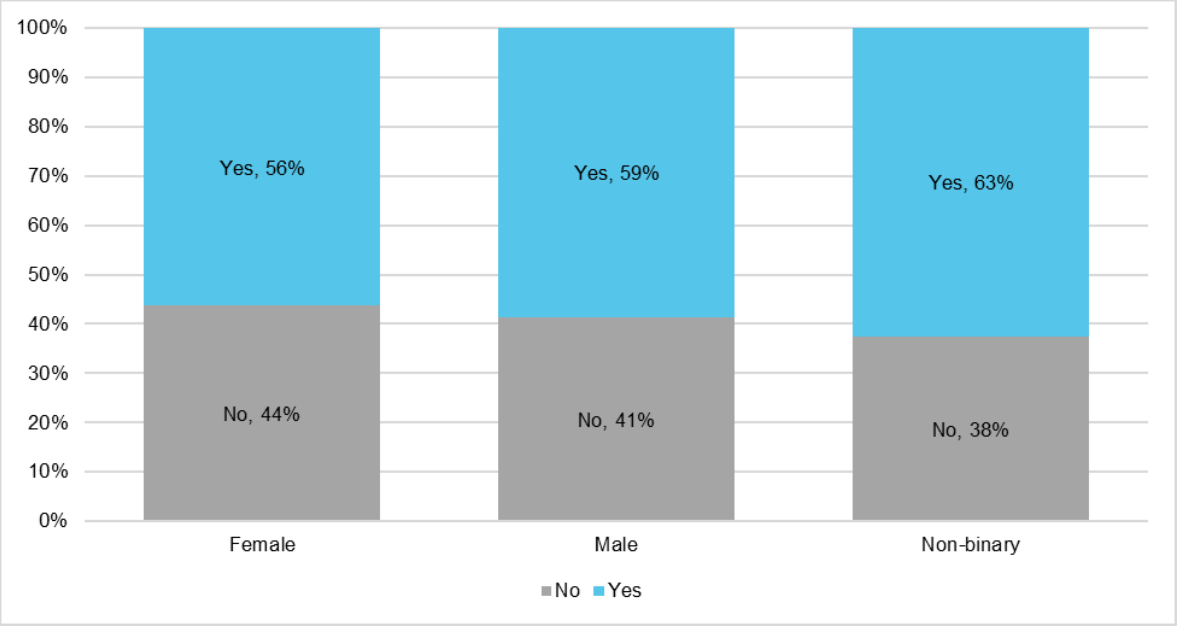
Crowe also observed similar trends across genders: 81% of respondents who identified as Female reported operating as a chauffeur before the pandemic, as compared to 56% who reported operating as a chauffeur during COVID. 87% of respondents who identified as Male reported operating as a chauffeur before COVID, as opposed to 59% that reported operating as a chauffeur during COVID. For all genders (defined in the survey as Male, Female, or Non-binary), chauffeur participation declined during COVID. See Figures 14-16.

Figure 14: Respondents Who Operated as a Chauffeur Before COVID by Gender



Percentages are rounded and may not equal 100%.

Figure 15: Respondents Who Operated as a Chauffeur During COVID by Gender



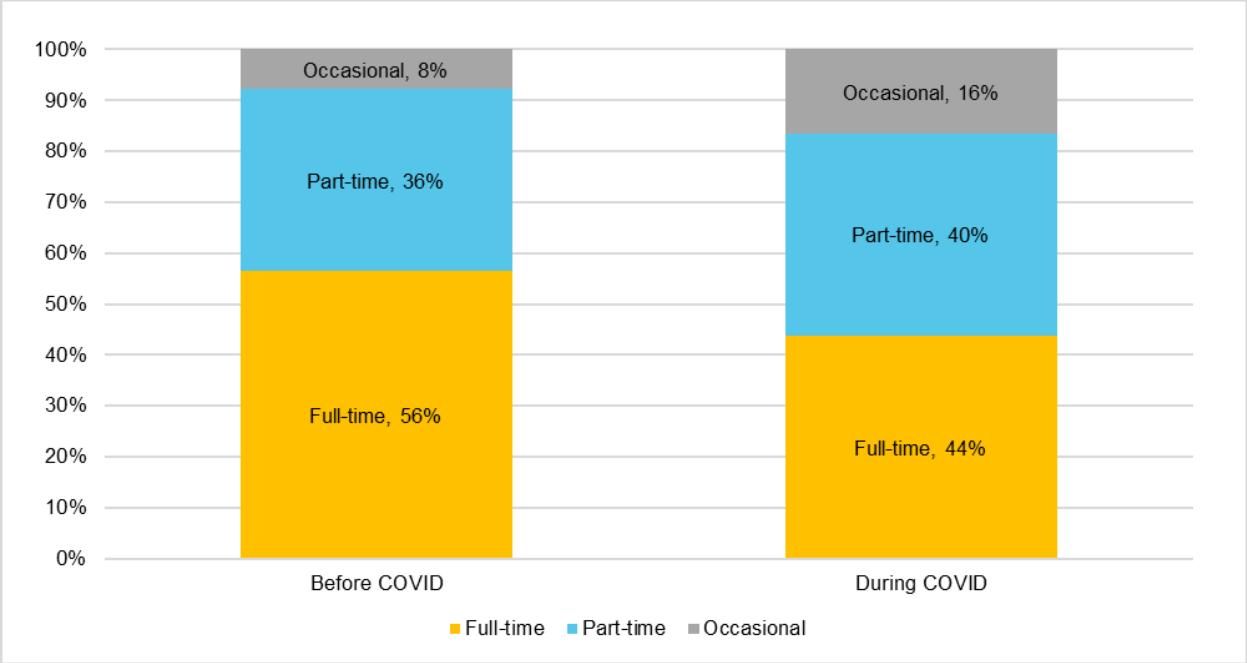
Percentages are rounded and may not equal 100%.

However, when analyzed by chauffeur type, this shift toward more part-time and fewer full-time chauffeurs was not uniform. Please see Figures 16-18. Taxicab, TNP, livery, and Other[4] chauffeurs reported a larger share of respondents who operated full-time *before* COVID as compared to *during* the pandemic.

The percentage of respondents who identified as a full-time taxicab + TNP chauffeur increased during COVID-19 as compared to before COVID-19. This finding could suggest that operators who had multiple revenue streams available to them (i.e., both TNP and taxicab opportunities) chose to increase their operating time during the pandemic to leverage all available options for earnings or to make up for other lost earnings from other sources.

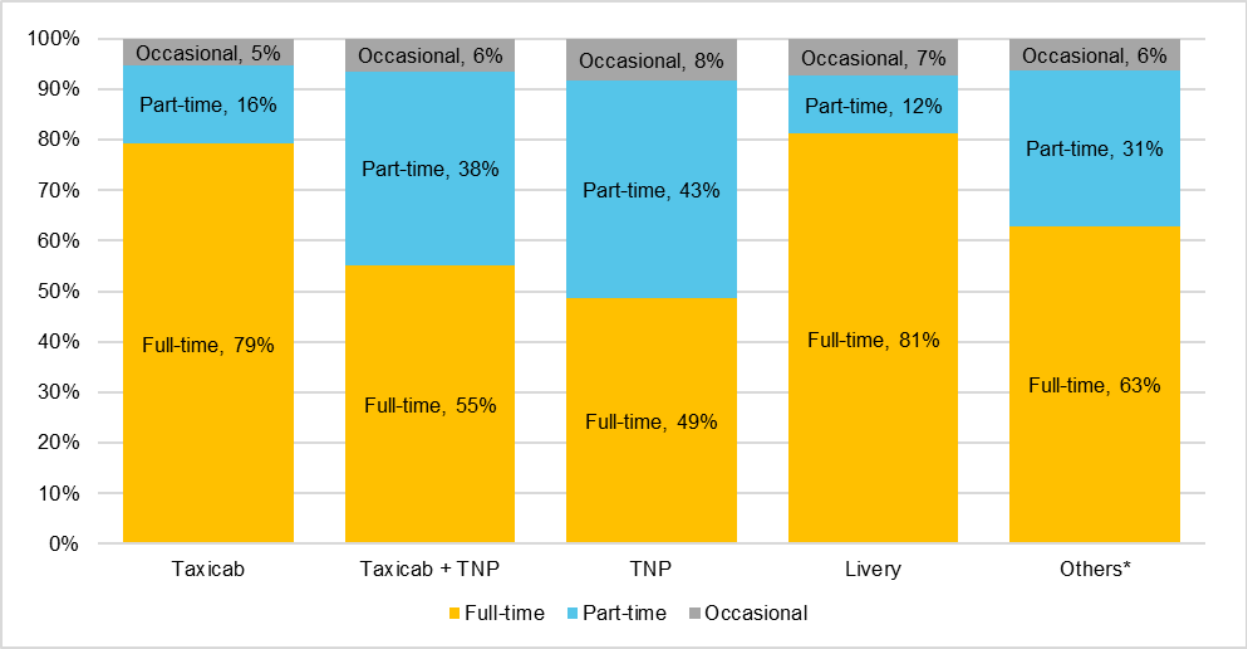
Taxicab, TNP, taxicab + TNP, and livery chauffeur groups all also reported larger shares of chauffeurs who operated occasionally during the pandemic as compared to *before* the pandemic. Again, this analysis suggests that some chauffeurs may have chosen to limit their operating hours *during* COVID months, possibly due to health and/or safety concerns or limited economic opportunities due to decreased rider demand.

Figure 16: Respondents' Chauffeur Status Before vs. During COVID



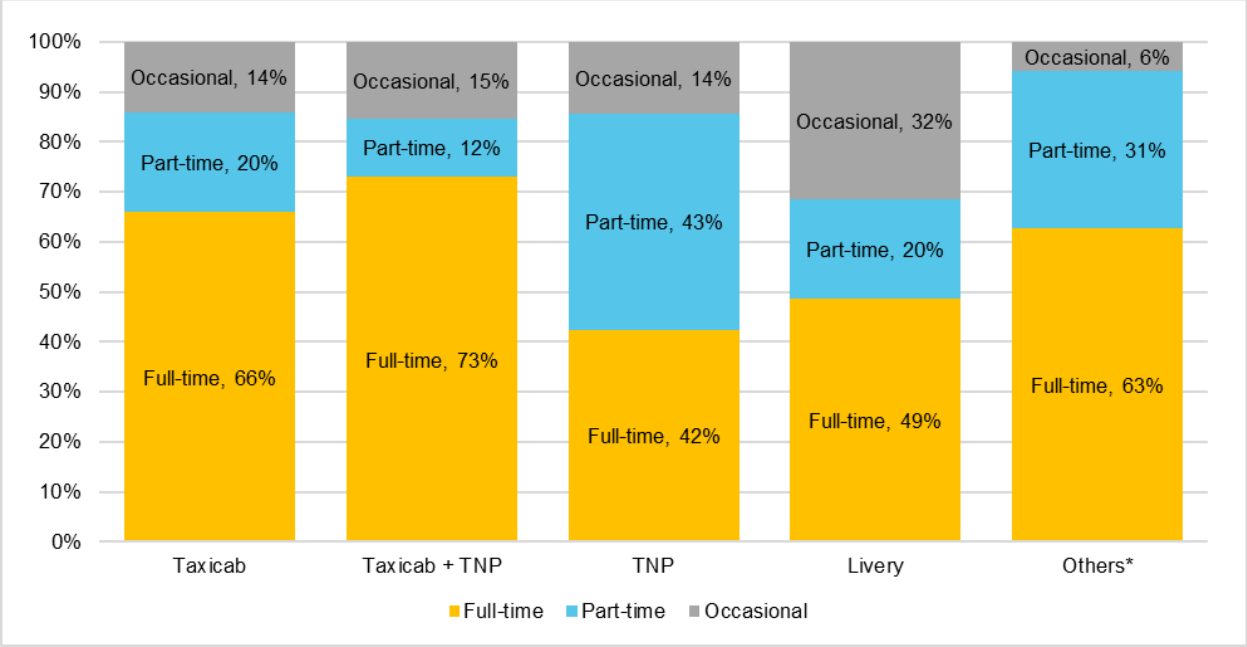
[4] *Other chauffeur combinations: taxicab + livery; TNP + livery; and taxicab +TNP + livery

Figure 17: Respondents' Chauffeur Status by Chauffeur Type Before COVID



Percentages are rounded and may not equal 100%.
*Other chauffeur combinations: taxicab + livery; TNP + livery; and taxicab +TNP + livery

Figure 18: Respondents' Chauffeur Status by Chauffeur Type During COVID



Percentages are rounded and may not equal 100%.
*Other chauffeur combinations: taxicab + livery; TNP + livery; and taxicab +TNP + livery

Variation in Results by Gender

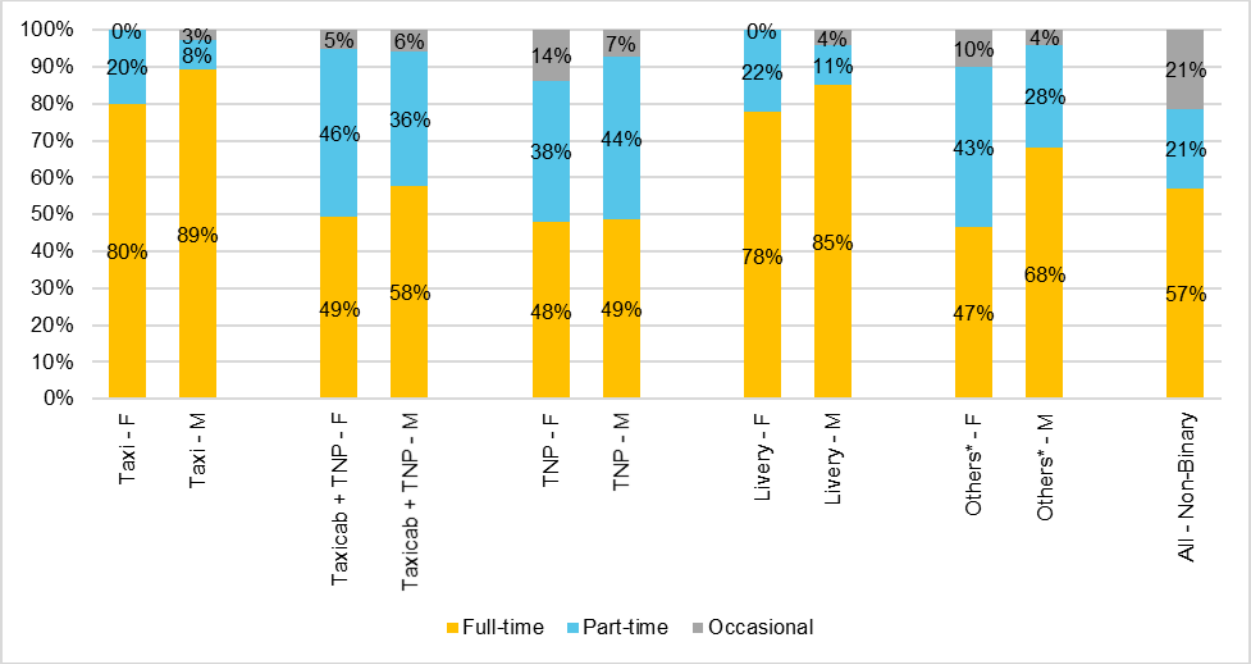
These results were also analyzed by gender identity. See Figures 19-20.

Crowe observed that across all PPV groups, more male Public Chauffeur Survey respondents reported operating "full-time" before COVID as compared to during COVID, with the exception of the taxicab + TNP group. Across all PPV groups, more male respondents reported operating "occasionally" during COVID as compared to before COVID.

Female respondents across PPV types had mixed responses: the percentage of self-reported full-time taxicab, taxicab + TNP chauffeurs, livery, and Others increased during COVID as compared to before COVID. The percentage of female full-time TNP chauffeurs decreased during COVID as compared to before COVID.

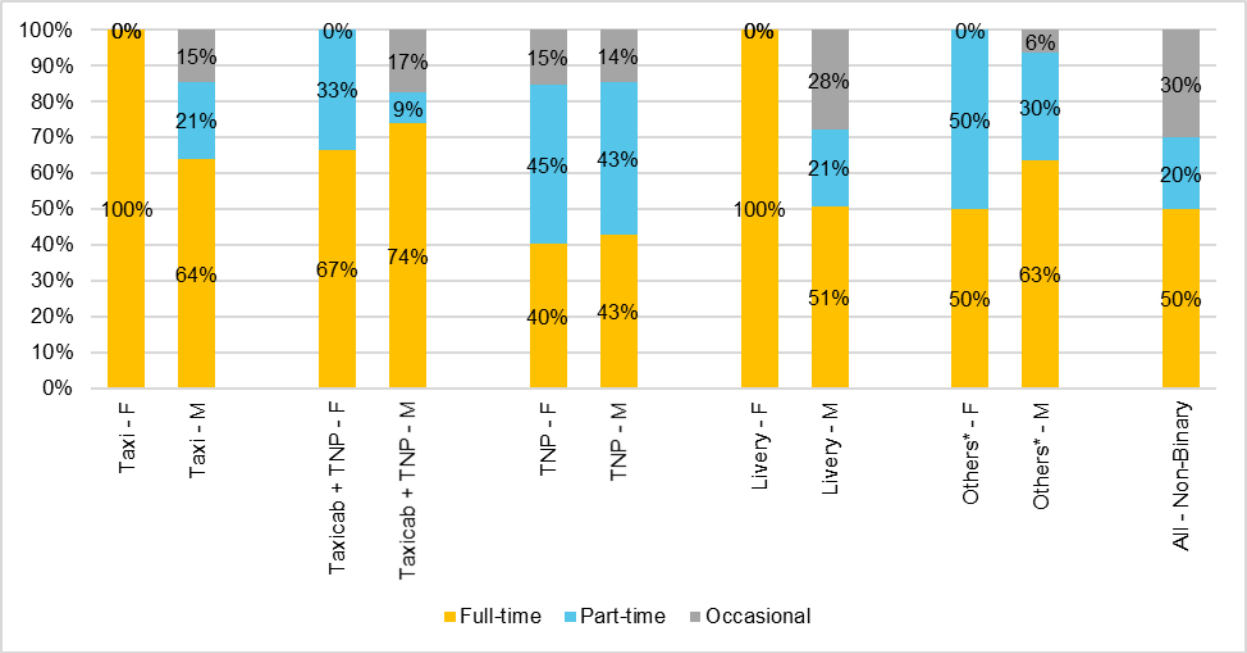
The percentage of full-time Non-Binary respondents decreased during COVID as compared to before COVID, the percentage of part-time Non-binary respondents decreased slightly during COVID as compared to before COVID, and the percentage of occasionalNon-Binary chauffeurs increased during COVID as compared to before COVID.

Figure 19: Respondents' Chauffeur Status by Chauffeur Type and Gender Before COVID



In the graph above, "F" and "M" indicate respondents who identified as female and male, respectively.
Percentages are rounded and may not equal 100%.

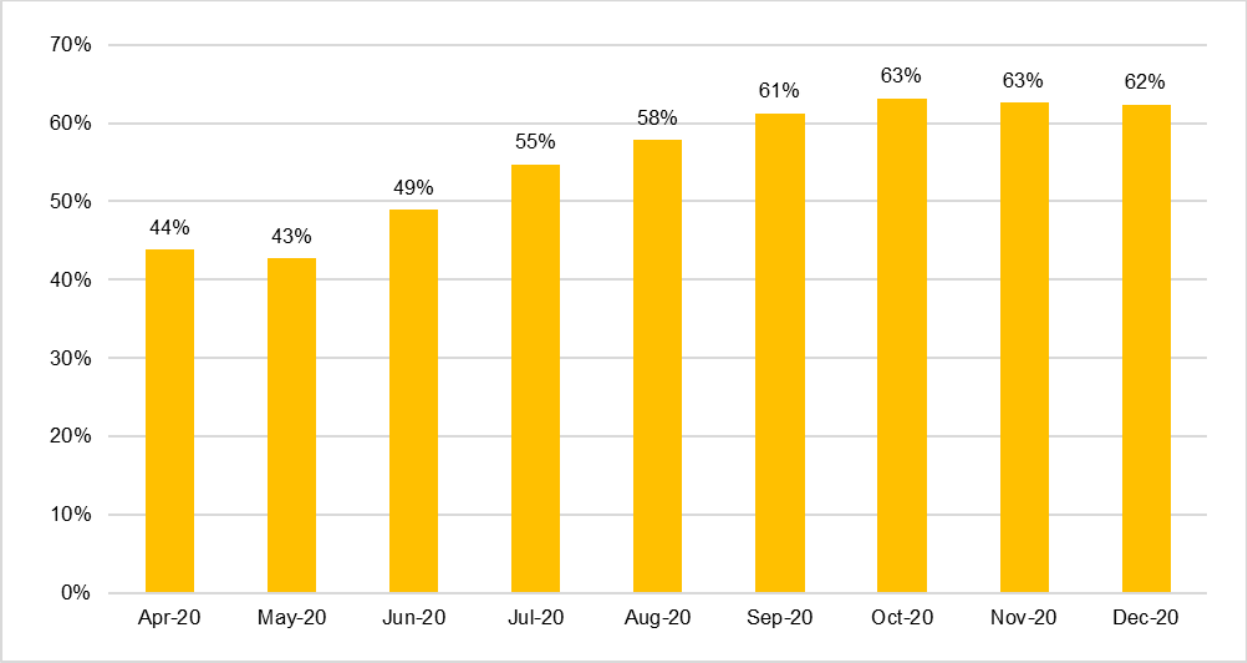
Figure 20: Respondents' Chauffeur Status by Chauffeur Type and Gender During COVID



In the graph above, "F" and "M" indicate respondents who identified as female and male, respectively.
Percentages are rounded and may not equal 100%.

As COVID continued into the later months of 2020, the number of surveyed individuals who reported operating as a chauffeur steadily increased. For example, only 44% of survey respondents reported operating in April of 2020; however, this percentage rose to 58% by August of 2020 and then 62% by December 2020. See Figure 21.

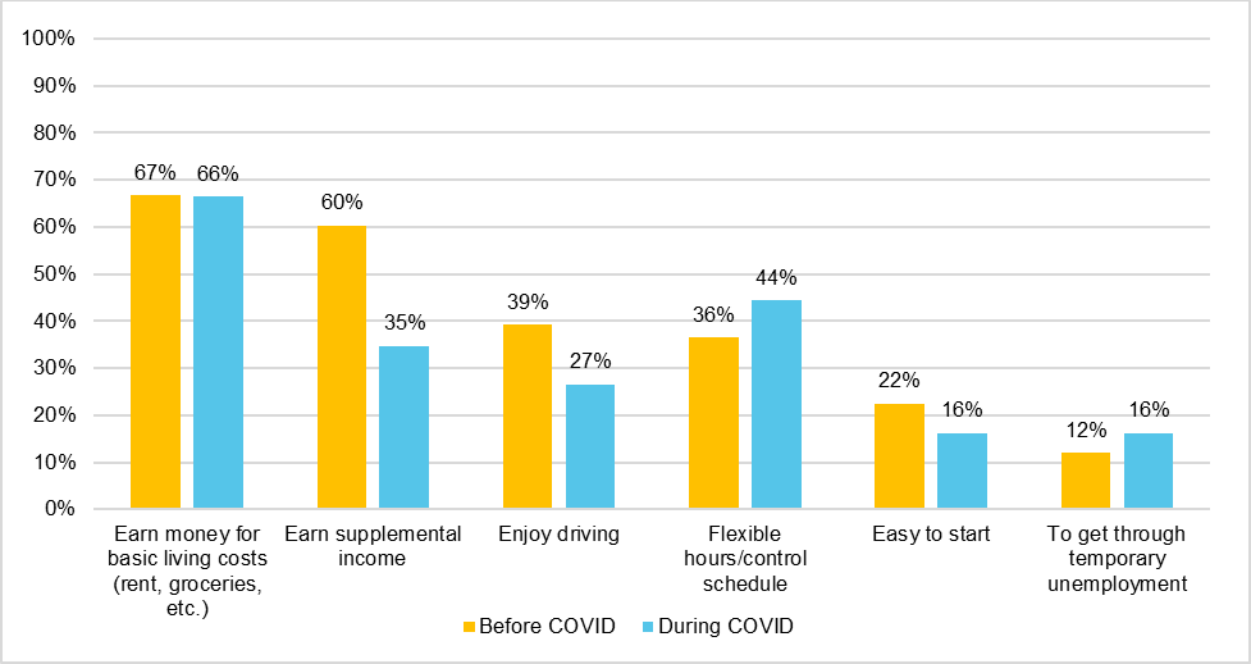
Figure 21: Respondents Who Operated as a Chauffeur During COVID



Motivations for Operating as a Chauffeur

The Public Chauffeur Survey explored individual motivations behind choosing to operate as a chauffeur. The percentage breakdown of survey responses is shown in Figure 22.

Figure 22: Respondents' Reasons for Operating as a Chauffeur Before vs. During COVID



In the Public Chauffeur Survey, respondents were able to choose all responses that applied to them. When asked about reasons for operating as a chauffeur both before and during COVID, the largest share of Public Chauffeur Survey livery, TNP, and taxicab respondents "earn money for basic living costs (rent, groceries, etc.)". The second most selected answer was "earn supplemental income."

Crowe also analyzed these results by chauffeur type. See Figures 23-24. There were notable increases in the percentage of survey respondents who identified "earn money for basic living costs" as a motivating factor during COVID compared to before COVID within certain chauffeur types.[5] As previously stated, within the Public Chauffeur Survey, fewer respondents answered questions specific to during COVID as compared to before COVID, and as such before COVID and during COVID response categories are not directly comparable. However, the analysis in Figures 23-24 may suggest that due to the loss of other employment opportunities within their household, chauffeurs may have been more reliant on earnings from operating as a chauffeur during COVID as compared to before COVID.

The most significant increase was observed in those respondents who reported operating as a taxicab + TNP chauffeur: 69% or respondents selected "earning money for basic living costs" as a motivator before COVID and 92% selected this motivator during COVID, representing a 23% increase. Notably, more Others survey respondents also selected "earning money for basic living costs" in the during COVID version of the question as compared to the before COVID version. 69% selected this answer as a reason for operating before COVID, as compared to 89% who selected this answer as a reason for operating *during* COVID, representing a 20% increase. 71% of livery respondents selected "earn money for basic living costs" before COVID, compared to 78% during COVID, a 7% decrease.

[5] Because each respondent could provide multiple reasons, the percentages across categories within each chauffeur type appear higher than when all answers are summed, as shown in Figures 23-24.

Figure 23: Respondents' Reasons for Operating as a Chauffeur Before COVID

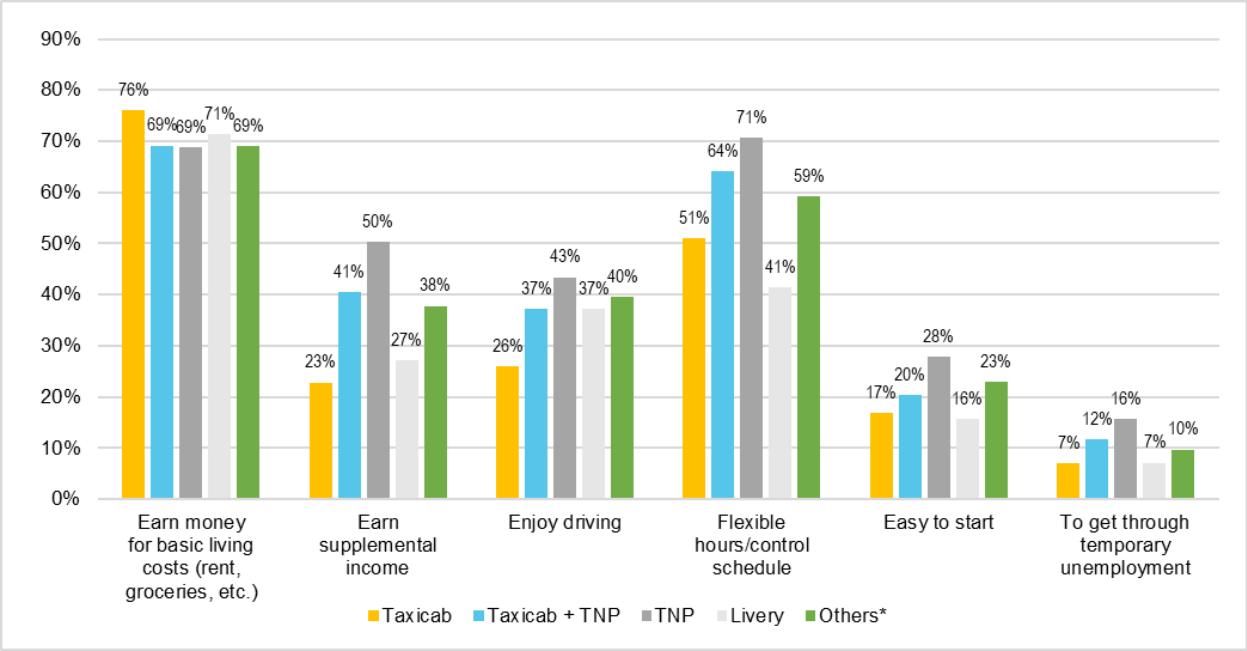
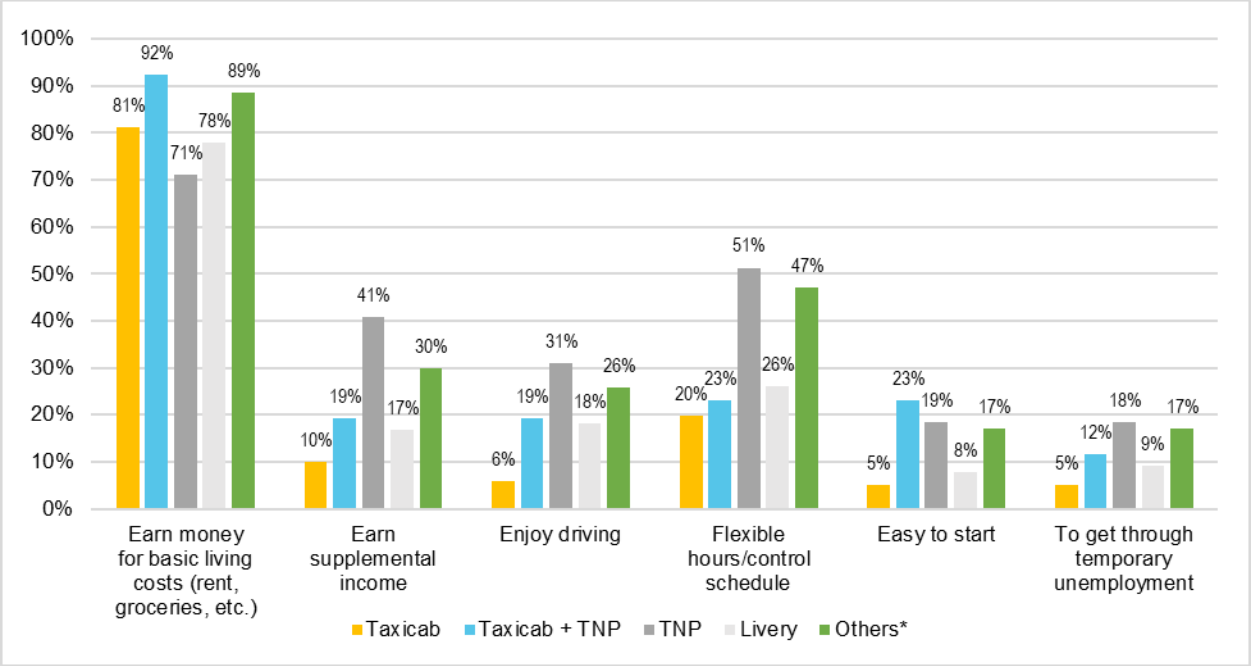


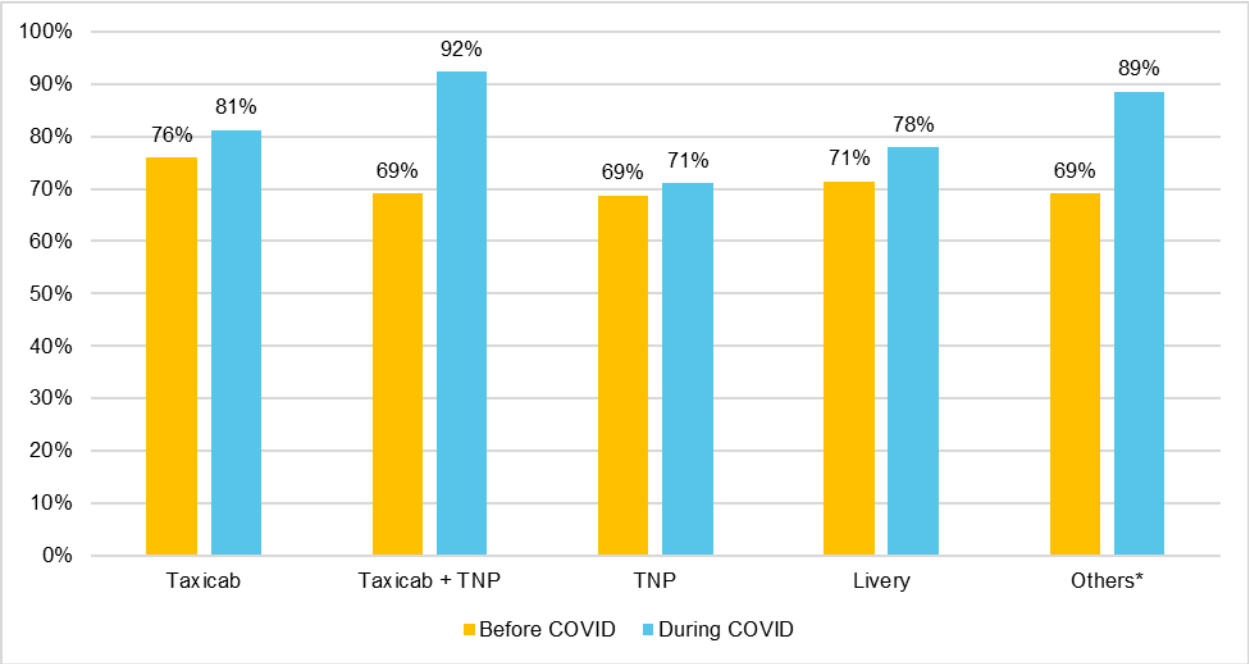
Figure 24: Respondents' Reasons for Operating as a Chauffeur During COVID



For respondents who operated as a taxicab + TNP chauffeur, we also observed a decrease in the share of individuals who selected *earn supplemental income* as a reason for operating as a chauffeur. Before COVID, 41% of taxicab + TNP survey respondents selected to *earn supplemental income* as a reason for operating; during COVID this percentage decreased to 19%, representing a 22% decrease.

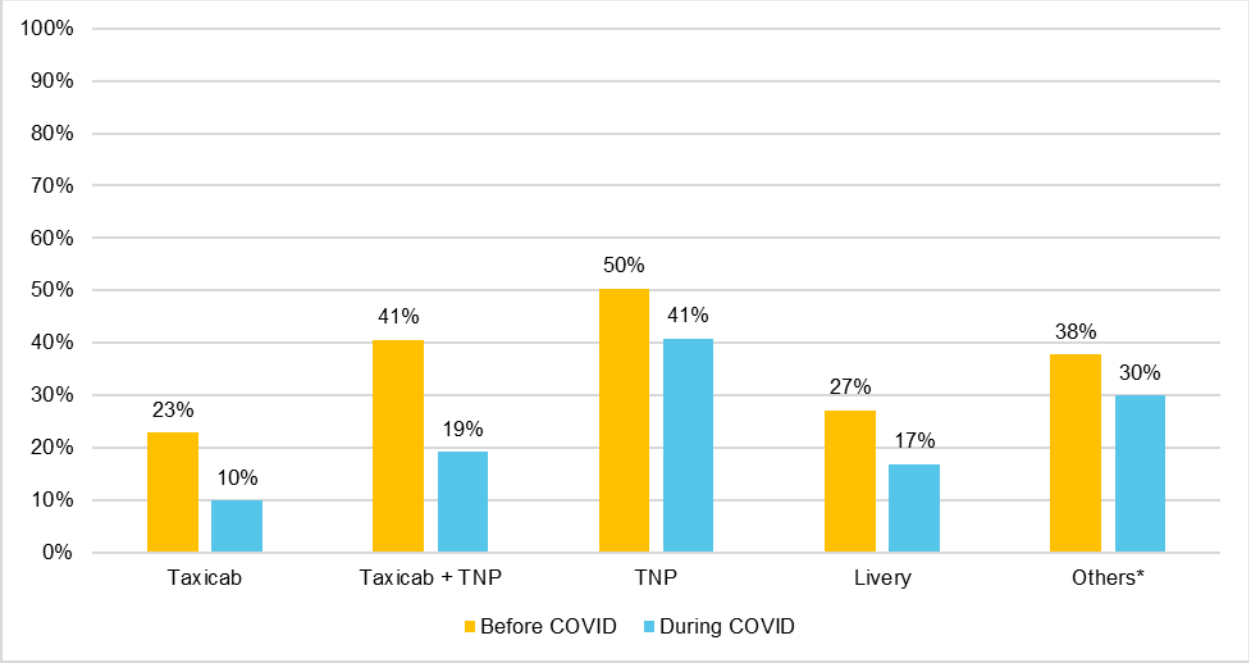
Notably, this percentage shift is the almost identical inverse of the 23% increase in respondents who selected "earning money for basic living costs" as a reason for operating. Across all chauffeur types, we observed this decrease in the percentage of chauffeurs who selected "earn supplemental income" during COVID as a reason for operating also held true across all chauffeur groups. See Figures 25-26.

Figure 25: Shift in "Earn Money for Basic Living Costs" Answer Before vs. During COVID



*Other chauffeur combinations: taxicab + livery; TNP + livery; and taxicab +TNP + livery

Figure 26: Shift in "Earn Supplemental Income" Answer Before vs. During COVID



*Other chauffeur combinations: taxicab + livery; TNP + livery; and taxicab +TNP + livery

For respondents in the taxicab + TNP group, the 23% increase in respondents who selected earning money for basic living costs as a reason for operating may be connected to other survey findings related to the increase in chauffeurs who operated full-time during the COVID-19 pandemic as compared to before COVID-19, as that group of chauffeurs who continued to operate during COVID may have chosen to operate additional hours to earn money for basic living costs.

Despite earlier findings related to the impact of COVID on chauffeurs, across all chauffeur types over 50% of Public Chauffeur Survey respondents reported that they are “Extremely likely” or “Very likely” to continue to operate as a chauffeur once the pandemic stabilizes or is under control. See Figures 27-28.

Figure 27: Likelihood of Continuing to Operate as Chauffeur Once COVID Stabilizes

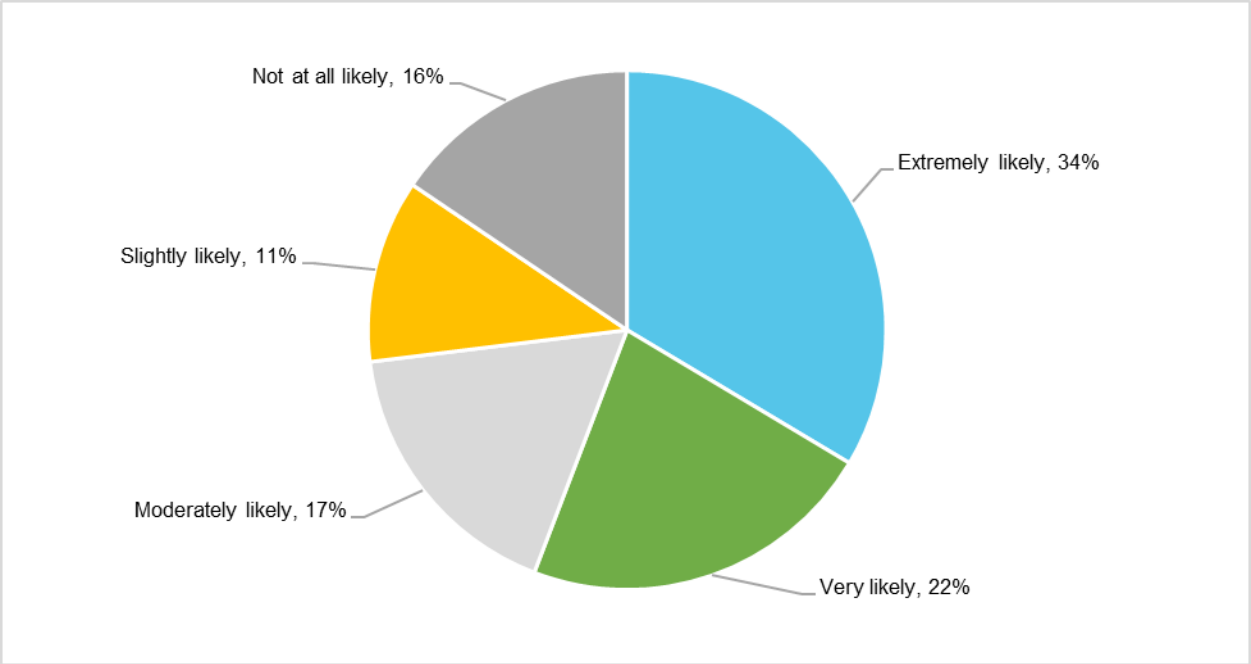
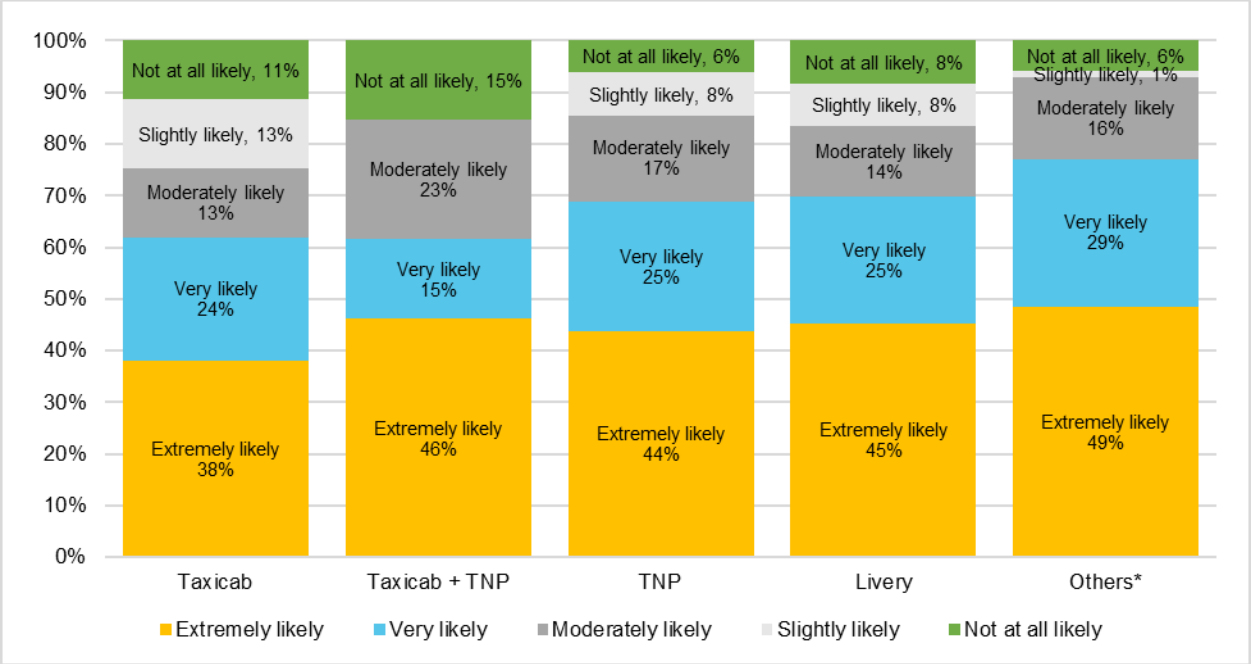


Figure 28: Likelihood of Continuing to Operate as Chauffeur Once COVID Stabilizes by Chauffeur Type



Percentages are rounded and may not equal 100%.
*Other chauffeur combinations: taxicab + livery; TNP + livery; and taxicab +TNP + livery

Vehicle Ownership

The Public Chauffeur Survey also asked respondents about the vehicle they utilize for public passenger vehicle chauffeuring. Please see Figure 29.

Figure 29: Respondents' Vehicle Ownership, Leasing, and Renting