

GLOBAL TAXI & RIDE-HAILING FIGURES 2024

SEPTEMBER | 2024

INTRODUCTION

Taxi and ride-hailing services¹ are being increasingly recognised as an important complement to and extension of the public transport (PT) network. They have the potential to enlarge the catchment area of PT, particularly through shorter, cost-effective, transit-extending trips in peripheral or low-density urban areas, as in the case of New York City².

The Global Taxi and Ride-Hailing Figures 2024 Brief aims to present a snapshot of taxi and ride-hailing services across the globe, focusing on aspects such as operational information, workforce, decarbonisation, digitisation and fares, evolving role in mobility, and short-term outlook. The goal is

to provide a better understanding of current trends and how taxi and ride-hailing services in selected cities stand in relation to the regional and global status quo.

DEFINITION AND METHODOLOGY

This publication covers the years 2022 and 2023 for taxi, defined as car-based, on-demand, and point-to-point services, and ride-hailing, defined as the platform-based matching of drivers and riders for similarly defined services. The data was collected via an online survey of local public authorities (27 respondents) over the period of March-May 2024, with the goal of aggregating comparable public data related to taxi companies and TNCs at the urban area of jurisdiction covered by the authority.

The International Association of Public Transport (UITP) also collected supplementary information on vehicles and drivers for 28 additional cities from other published sources, such as those made available by national statistics offices or transport authorities, to increase the value for readers. All data was collected and analysed by UITP.

It is important to note that the applicable regulations or regulatory bodies with oversight of taxi companies and TNCs are often different. This has implications for both



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¹ Defined here as car-based point-to-point services resulting from platform-based matching of drivers and riders. These platforms are typically developed by so-called transport network companies (TNCs).

² Fangru Wang and Catherine L. Ross, "New Potential for Multimodal Connection: Exploring the Relationship between Taxi and Transit in New York City (NYC)," *Transportation* 46, no. (June 1, 2019): 1051–72, <https://doi.org/10.1007/s11116-017-9787-x>.

PARIS TAXIS AND TNCS – A CASE STUDY³ OF THE 2024 OLYMPICS HOST CITY

What is the current status of the taxi and ride-hailing sector in a large metropolitan area that can serve as reference point for this brief? The Paris Metropolitan Area has an area of 11,952 square kilometres (km²), comprising 12.4 million inhabitants, with a density of 1,037 inhabitants per km². In 2021, the area had a gross domestic product (GDP) of EUR 757.6 billion.

In 2021, France had 61,500 taxis and 40,000 TNC drivers. Most of them were in Île-de-France (Paris Region), where there were 17 taxis per 10,000 inhabitants, compared to the much lower national average of 9. Furthermore, 80% of ride-hailing trips that year took place in Île-de-France. In October 2021, 6% of all TNC rides started in train stations, and 7% ended in train stations, showing some integration with the PT network (data not available for metro, tram, or bus stations).

Half of the Parisian fleet was composed of hybrid vehicles, with an average vehicle age of 3.5 years for taxis and 4.5 years for TNCs. Between 2018 and 2021, the addition of new, fully internal combustion engine (ICE) vehicles decreased by 25% in taxi companies and 30% in TNCs, whereas the introduction of hybrids increased by 20% in taxi companies and 52% in TNCs, contributing to the sector's decarbonisation. Most vehicles, for both taxi companies and TNCs, are owned by the drivers.

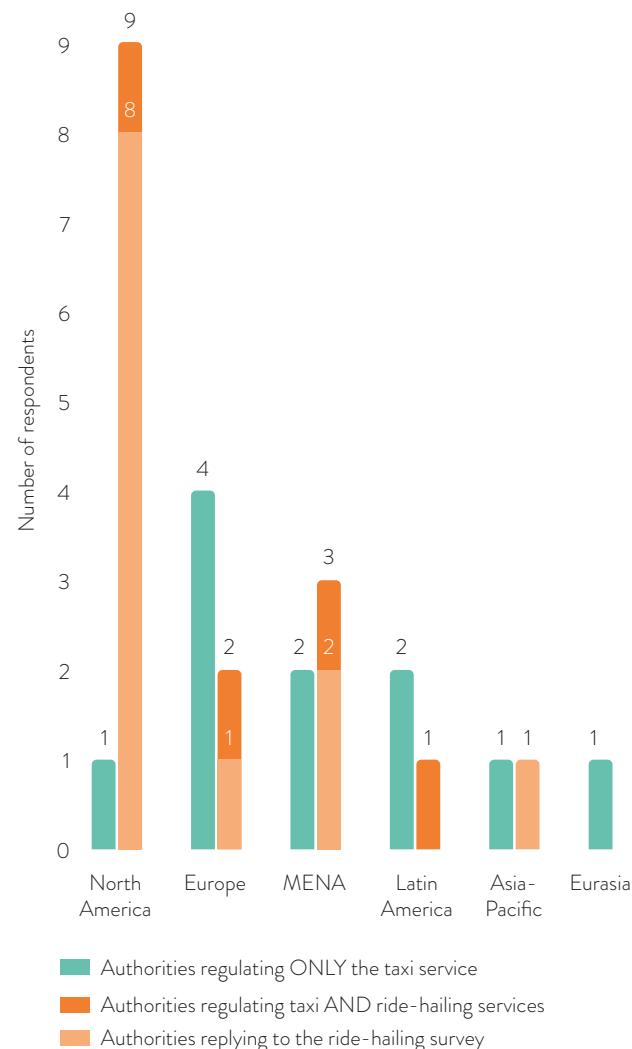
The demographic renewal of taxi and ride-hailing drivers seems to be happening predominantly under new ride-hailing licences. New drivers in the ride-hailing sector are younger than taxi drivers on average. In 2021, 50% of TNC drivers were below 40, and only 19% were above 50. Of the 40,000 TNC drivers in France, 74% were in the Paris Region, out of which 20% were in Seine-Saint-Denis, an area with higher levels of unemployment and low-income households⁴. Taken together with the age profile, this indicates that TNCs are providing jobs and playing a role in the economic integration of vulnerable populations.

the availability of data to different public authorities and the consistency and comparability of such data. Where possible and relevant, this study also used data from *Global taxi and ride-hailing benchmarking study 2019-21* to get a broader perspective on trends over time.

Regarding the survey data, all 27 respondents replied to the taxi portion of the questionnaire while 12 out of 16 with ride-hailing regulatory knowledge replied to the ride-hailing portion (Figure 1). However, not all respondents filled in all the data fields. As such, there is missing data for 22% of the taxi survey fields and 15% of the ride-hailing fields.⁵

As already noted in the 2019-21 benchmarking study, the growing digitisation of services does not necessarily translate to an increase in the public availability of data.

Figure 1 - Survey respondents by region and mobility service



3 “Les Taxis et VTC En 2021. Rapport de L’Observatoire National Des Transports Publics Particuliers de Personnes” (Ministère de la Transition écologique et de la Cohésion des Territoires, July 2023).

4 Agnès Audier, “Seine-Saint-Denis: A French Suburb’s Quest for Employment and Inclusion” (Institut Montaigne, May 2020).

5 One indicator can have several fields, e.g. a time series.

TRENDS

THE SIZE AND EVOLUTION OF THE FLEET AND TRIPS

The supply of taxis is somewhat balanced across cities, whereas the ride-hailing fleet varies significantly (Figure 2)⁶. Beyond the basic difference in the usage of vehicles (taxis are used most of the day, while ride-hailing vehicles are used a variable and lower number of hours during the week), this can potentially be attributed to both local regulations and passenger demand.

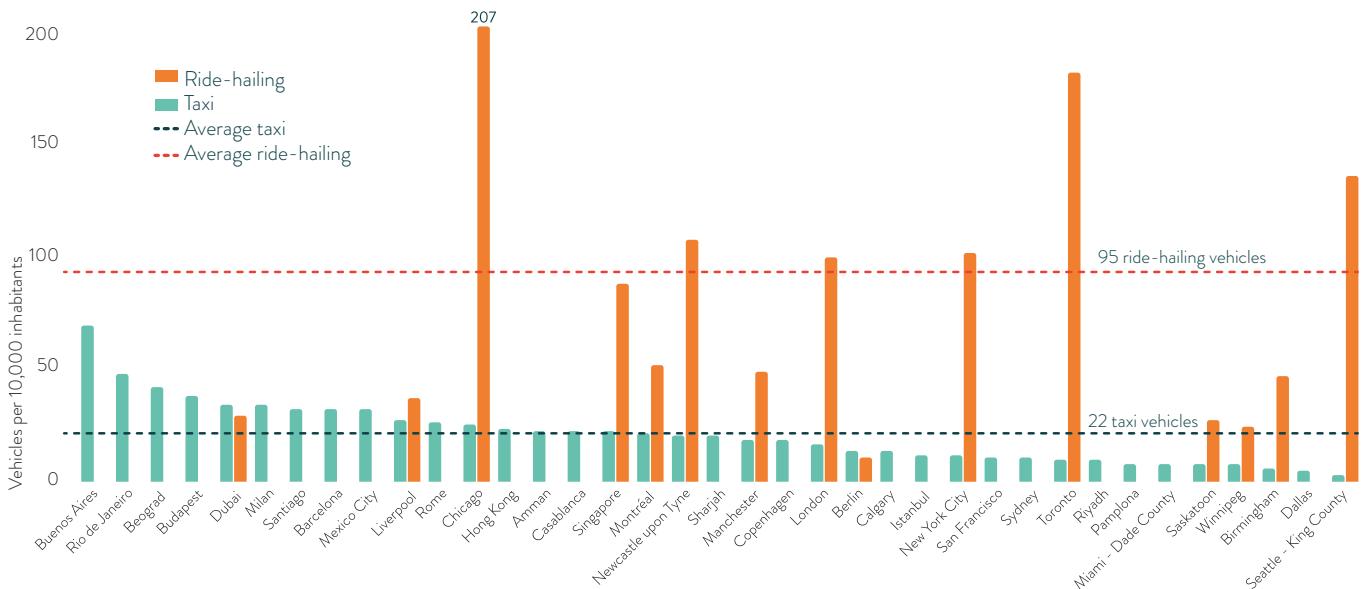
Ride-hailing data indicates that the fleets are 5.5 times larger on average than taxi fleets in 13 cities out of 15. Of the cities for which ride-hailing data is available, the offer is largest in metropolitan areas, as illustrated by the Paris case study.

Toronto has the highest amount of ride-hailing vehicles per taxi (18.6), and it is the only city that has placed a limit on the number of ride-hailing vehicles.

Buenos Aires has the largest taxi fleet by population, because taxis were the only PT service managed by the municipality until 2013 (when the metro came back under the purview of the local authority, while the bus and suburban railway services remained under national jurisdiction).

While the taxi fleet evolution between 2022 and 2023 was practically stable (+0.4%), the number of ride-hailing vehicles increased significantly, by 21%. One can better understand this variation by taking a step back and analysing the fleet variation from 2019 to 2023 in the cities where historical series are available (Figure 3)⁷.

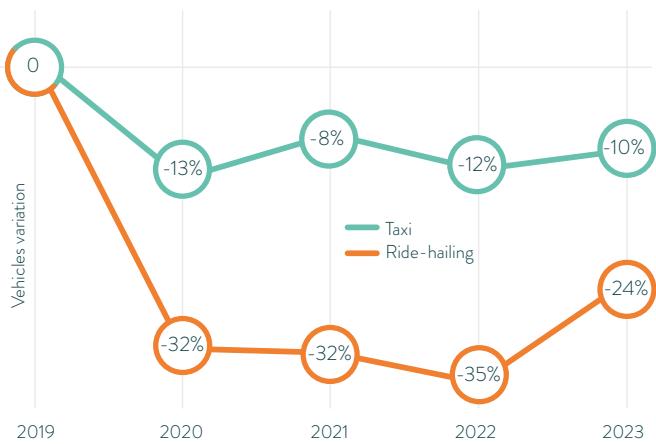
Figure 2 – Taxi and ride-hailing vehicles, 2023



6 In Figure 2, taxi figures cover 300,000 vehicles and 37 cities; ride-hailing figures cover about 420,000 vehicles and 15 cities.

7 In Figure 3, taxi figures cover 19 cities (Beijing, Budapest, Casablanca, Chicago, Copenhagen, Dubai, Hong Kong, Istanbul, London, Mexico City, Milan, Montréal, Oslo, Rome, San Francisco, Santiago, Singapore, Sydney, & Taipei); ride-hailing figures cover 4 cities (Chicago, Dubai, London, & Singapore).

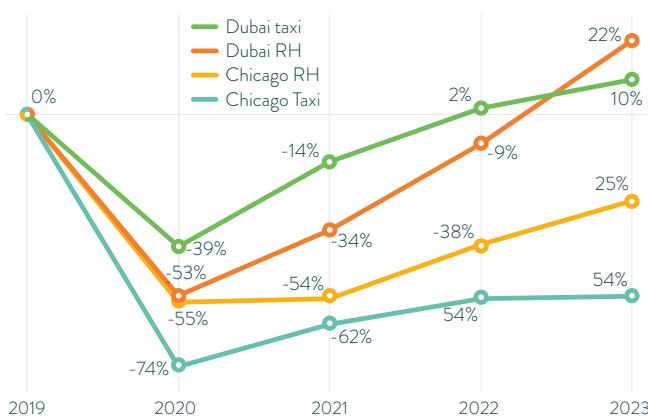
Figure 3 - Annual fleet variation from 2019 baseline



The 2019 coronavirus disease (COVID-19) pandemic had a huge impact on the ride-hailing fleet, reducing it by 32% in one year. Both fleets remained at decreased levels until 2023, when an uptick finally became apparent.

Unlike the number of vehicles, the number of trips in both the taxi and ride-hailing sectors decreased dramatically in 2020. Zooming in on two cities for which we have a complete time series, Chicago and Dubai (Figure 4), an identical dip is visible due to the pandemic (74% in the case of Chicago taxis). Nevertheless, there was a strong recovery in the number of trips starting immediately in 2021. For instance, the number of Dubai ride-hailing trips increased 22% from 2019 to 2023. The number of ride-hailing trips are recovering more quickly than the number of taxi trips.

Figure 4 - Annual taxi & ride-hailing trip variation in Chicago and Dubai from 2019 baseline



We complement the analysis with a comparison of the number of trips per passenger for 16 cities surveyed in this study (Figure 5)⁸. The sample shows that there were 28 daily trips per taxi on average in 2023, while for ride-hailing, there were 5 daily trips per vehicle. There is a strong, positive correlation between the number of taxis operating in double shifts in a city and the number of trips with passengers, as double shifts maximise the fleet's potential. Another factor that can influence the number of taxi trips is the presence of a strong ride-hailing service. Some of the cities with a higher number of daily taxi trips per vehicle, such as Winnipeg and Dubai, have a low number of ride-hailing vehicles per 10,000 inhabitants.

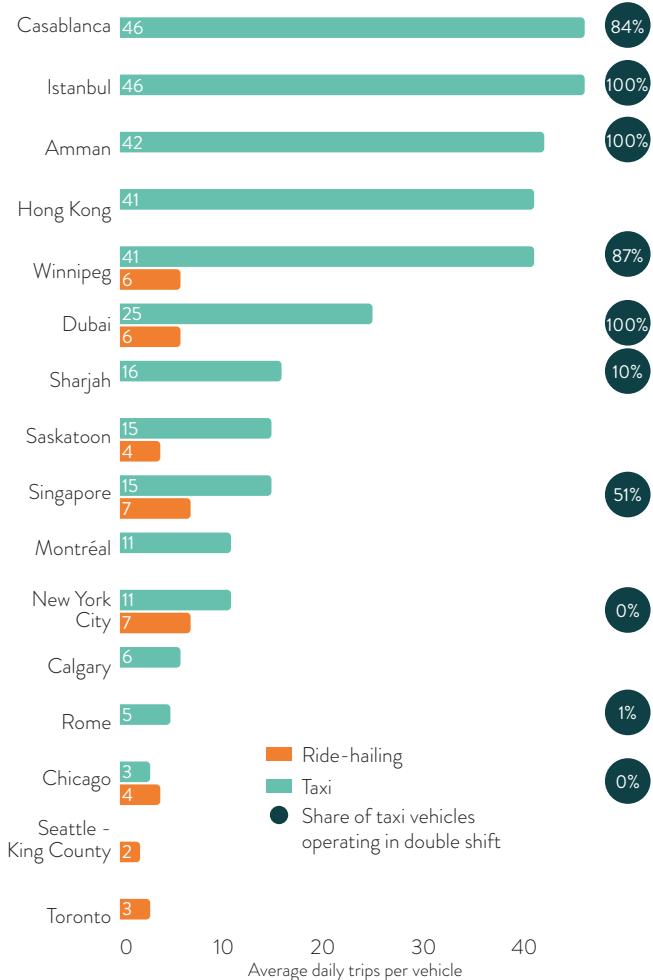
The number of trips with passengers per vehicle per day, between 2022 and 2023, increased by 3.6% for taxis (13 cities) and 9.8% for ride-hailing (10 cities). However, this varies substantially across cities and regions. For instance, in the seven North American cities surveyed, the number of ride-hailing trips increased by 16% in 2023. None of the six European cities that took part in the survey were able to provide this indicator, showing a gap in available data on taxi and ride-hailing operations.

THE WORKFORCE

Drivers are at the core of the workforce providing taxi and ride-hailing services. Furthermore, as highlighted in the Paris case study above, as well as other sources⁹, the taxi and ride-hailing sector can be a powerful employment tool. How do the cities in this study stand in terms of drivers?

Across the sample, there is an average of 38 taxi and 120 ride-hailing drivers per 10,000 inhabitants, with lots of

Figure 5 - Taxi and ride-hailing trips with passengers, 2023



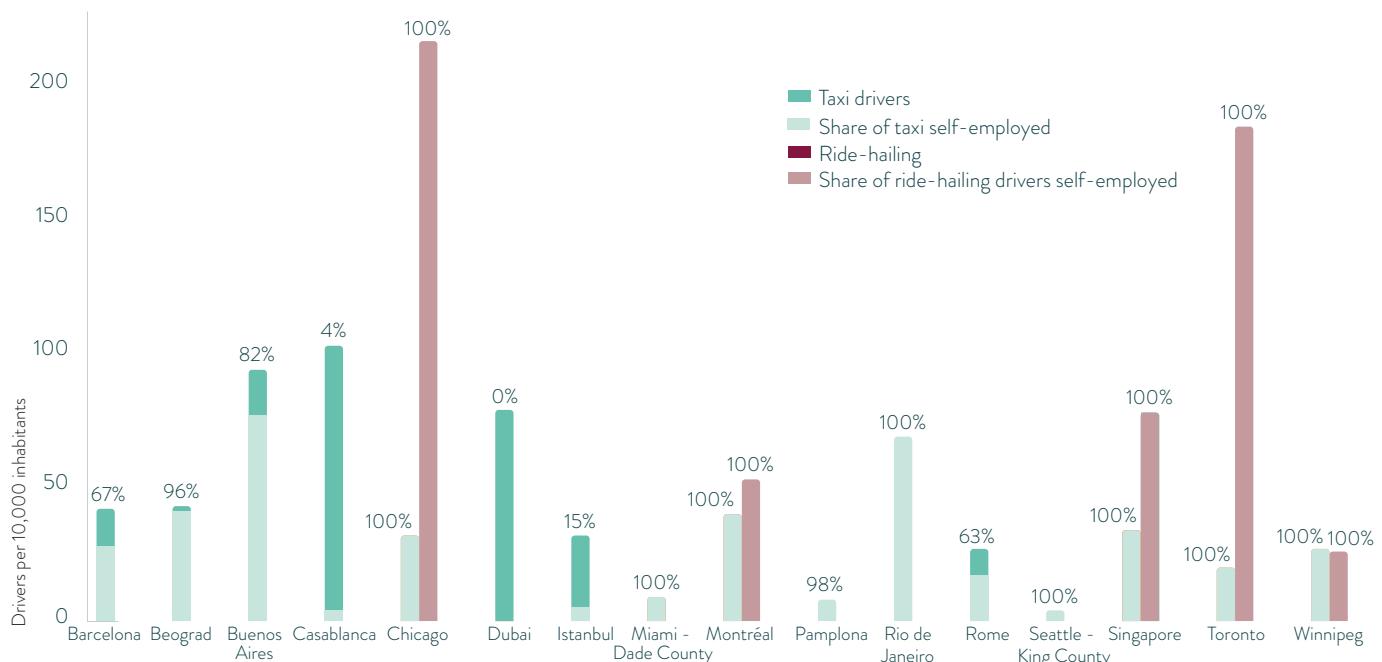
variation between cities and between taxi and ride-hailing (Figure 6). Winnipeg is the only city that has slightly more taxi than ride-hailing drivers. Cities adopting a **double shift** operation model also have higher driver/vehicle ratios. For instance, Casablanca has the largest number of taxi drivers per vehicle, with a ratio of 4.4 drivers per vehicle, followed by Winnipeg, with 3.5 drivers/vehicle, and Istanbul, with 2.6 drivers/vehicle. Double shifts boost the taxi employment potential, along with service levels and operational efficiency.

In terms of **socioeconomic profiles**, taxi and ride-hailing drivers are mostly self-employed in the surveyed cities (Figure 6). There are exceptions, such as Dubai, which is the only city where 100% of taxi and ride-hailing drivers are employees. Furthermore, Casablanca's and Istanbul's taxi sectors have over 50% employed drivers. Rome, Barcelona, Budapest, Buenos Aires, Belgrade, and Pamplona have a 4-37% share of employed drivers.

8 In Figure 5, taxi figures cover 14 cities; ride-hailing figures cover 8 cities. Chicago includes the total number of vehicles (not only active vehicles). Rome has estimated values considering only the dispatched trips from third party providers.

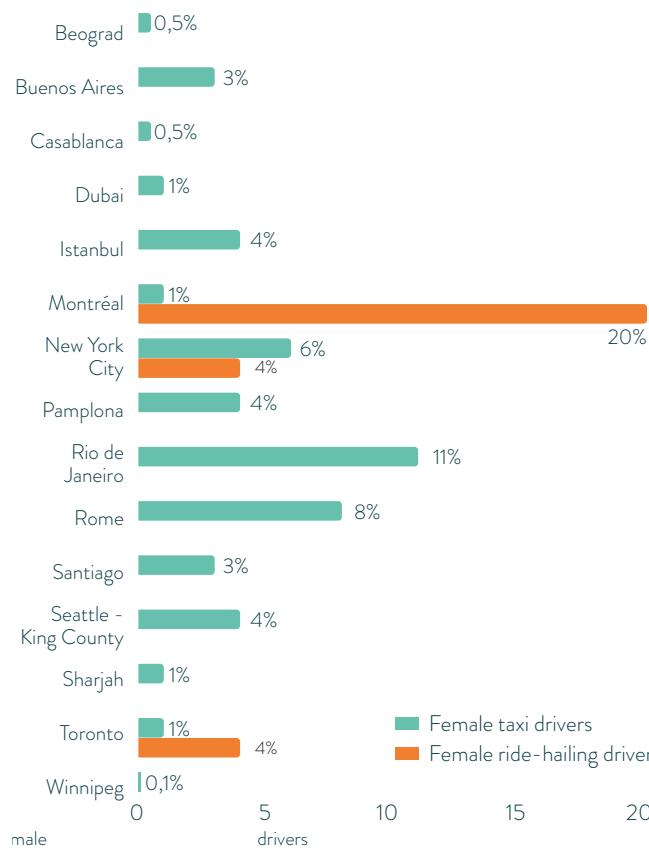
9 Bernard Salt and Joel Bevin, "Australian Taxi Industry Association: Ethnic Profile of the Taxi Industry" (KPMG, October 2009).

Figure 6 - Taxi & ride-hailing drivers and share of self-employed taxi drivers, 2023



Gender participation in the profession remains unbalanced (Figure 7). The average share of female taxi drivers is 4%, with the highest value being 11% in Rio de Janeiro. For ride-hailing, Montreal stands out, with 20% female drivers.

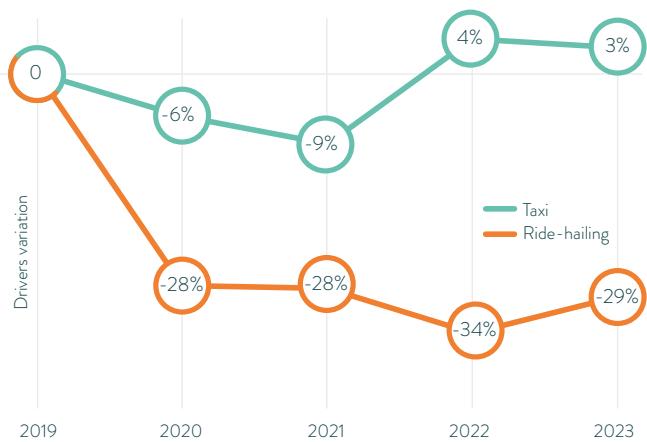
Figure 7 - Share of female drivers, 2023



The average taxi driver age in 2023 was 50, while for ride-hailing, it was 42. The age profile across taxi and ride-hailing services is similar to that of the Paris case study presented above. A possible explanation is that ride-hailing poses fewer barriers to new entrants seeking supplemental or emergency income, especially in large metropolitan areas¹⁰.

In terms of **number of drivers**, in the 17 cities that provided data for 2022-2023, the number of taxi drivers decreased by 0.6%, while for ride-hailing, the number increased by 4.5% (8 cities covered).

Figure 8 - Annual driver variation from 2019 baseline



However, when taking into account data from 2019, for a subset of cities (Figure 8), it becomes apparent that the COVID-19 pandemic had a bigger impact on the number of ride-hailing drivers (-28% in 2021) than on

10 Nurulhuda Jamaluddin et al., "Driver Profile and Travel Distance among E-Hailing Drivers: An Exploratory Study," International Journal of Road Safety 2, no. 1 (May 1, 2021): 24–29; Alejandro Henao and Wesley E. Marshall, "An Analysis of the Individual Economics of Ride-Hailing Drivers," Transportation Research Part A: Policy and Practice 130 (December 1, 2019): 440–51, <https://doi.org/10.1016/j.tra.2019.09.056>.

11 In Figure 8, taxi figures cover 7 cities (Casablanca, Chicago, Dubai, Istanbul, London, Montréal, & Singapore); ride-hailing figures cover 2 cities (Chicago & London).

taxi drivers (-9%)¹¹. The number of taxi drivers also recovered faster, surpassing pre-pandemic levels by 4% in 2022. Ride-hailing drivers, on the contrary, had their worst year in 2022 (-34% in number compared to 2019). Their number only started to grow again in 2023 (reaching 2021 levels, -29%). Therefore, it makes sense that from 2022 to 2023, the number of ride-hailing drivers increased more rapidly, since the number of taxi drivers had already (potentially) stabilised to pre-COVID-19 levels by that point.

DECARBONISATION

In Europe alone, the exhaust emissions of greenhouse gases (GHGs) from the overall transport sector increased by 33% between 1990 and 2019, according to the European Environment Agency. The decarbonisation of high-mileage vehicles such as those used for taxi and ride-hailing services is therefore crucial to climate sustainability, as explored in the UITP Knowledge Brief on taxi and ride-hailing electrification.

What is the current share of clean vehicles¹² in the fleets (Figure 9)?¹³

In the data available for 2023, both taxi and ride-hailing fleets have a minimal share of clean vehicles—2% and 8%, respectively¹⁴.

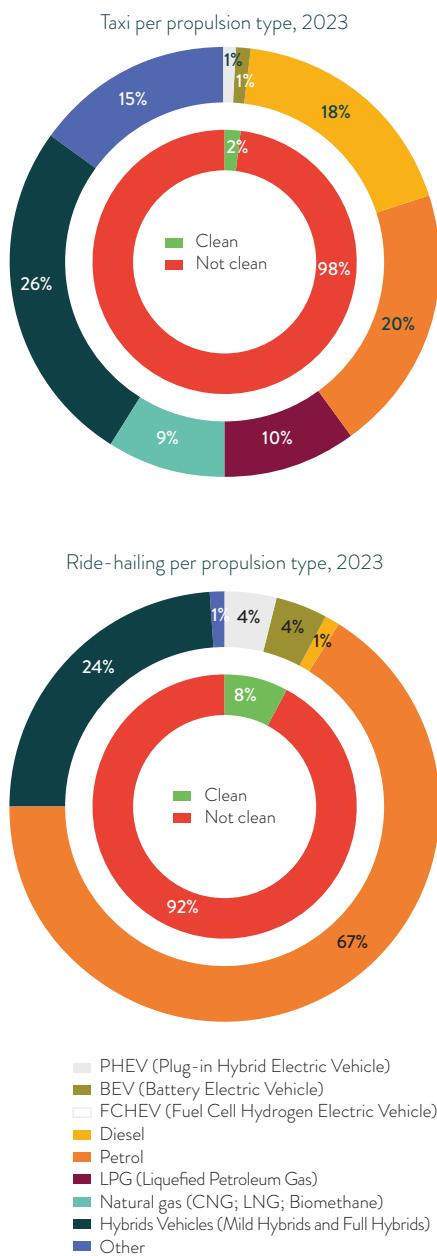
These clean vehicles are equally divided between BEVs and PHEVs. Looking at ‘not clean’ vehicles, the ride-hailing fleet employs primarily petrol cars (67%), followed by mild or full hybrids (24%). The taxi fleet composition is more varied, with mild or full hybrids (26%), petrol (20%), LPG or natural gas (19%), and diesel (18%).

This snapshot refers to the aggregate data, but there are differences among cities. Just as an example of the range, Toronto has a taxi fleet with 32% clean vehicles, whereas some other cities have shares below 1 percent. The key takeaway is that fleet electrification is at low levels and all stakeholders involved, including e.g. operators, infrastructure providers, and regulators, must work together to change the situation.

How polluting is the current fleet? Using the average age of the fleets’ vehicles as a proxy for their efficiency, and assuming that newer vehicles are more efficient and therefore less polluting, the average age of the taxi fleet in 2023 was 7 years, while that of the ride-hailing fleet was 5, around 30-45% below the maximum regulated age per category. Differences among cities are significant, with Dubai’s average vehicle age being slightly above 3 years for both categories and that of Chicago reaching 12 years for taxis.

Another contributor to decarbonisation is the efficiency of taxi or ride-hailing operations, i.e. the share of km driven with passengers (Figure 10). Only a few of the surveyed cities provided this data, and only for taxis, but it is nevertheless sufficient to identify a pattern. The share of km driven with passengers seems to hover around 60%, a finding that generally aligns with data in the previous benchmarking brief and indicates that taxi operations have the potential to increase their efficiency, depending on the local context and constraints.

Figure 9 - Taxi and ride-hailing fleets by propulsion type, 2023

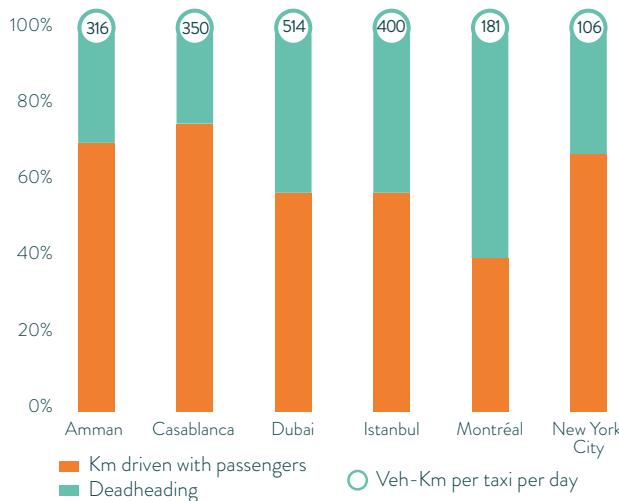


12 In this brief, clean vehicles are defined according to the European Union’s Clean Vehicles Directive (2019/1610) and include battery electric vehicles (BEVs), plug-in hybrid electric vehicles (PHEVs), and fuel cell electric vehicles (FCEVs). ‘Not clean vehicles’ include diesel, petrol, liquefied petrol gas (LPG), natural gas, and mild and full hybrid vehicles.

13 In Figure 9, taxi figures cover 220,000 vehicles and 24 cities; ride-hailing figures cover about 250,000 vehicles and 6 cities.

14 This figure does not match the preceding UITP benchmarking study because the methodology used to classify vehicles was different.

Figure 10 - Share of km driven by taxis with passengers, 2023



DIGITISATION AND FARES

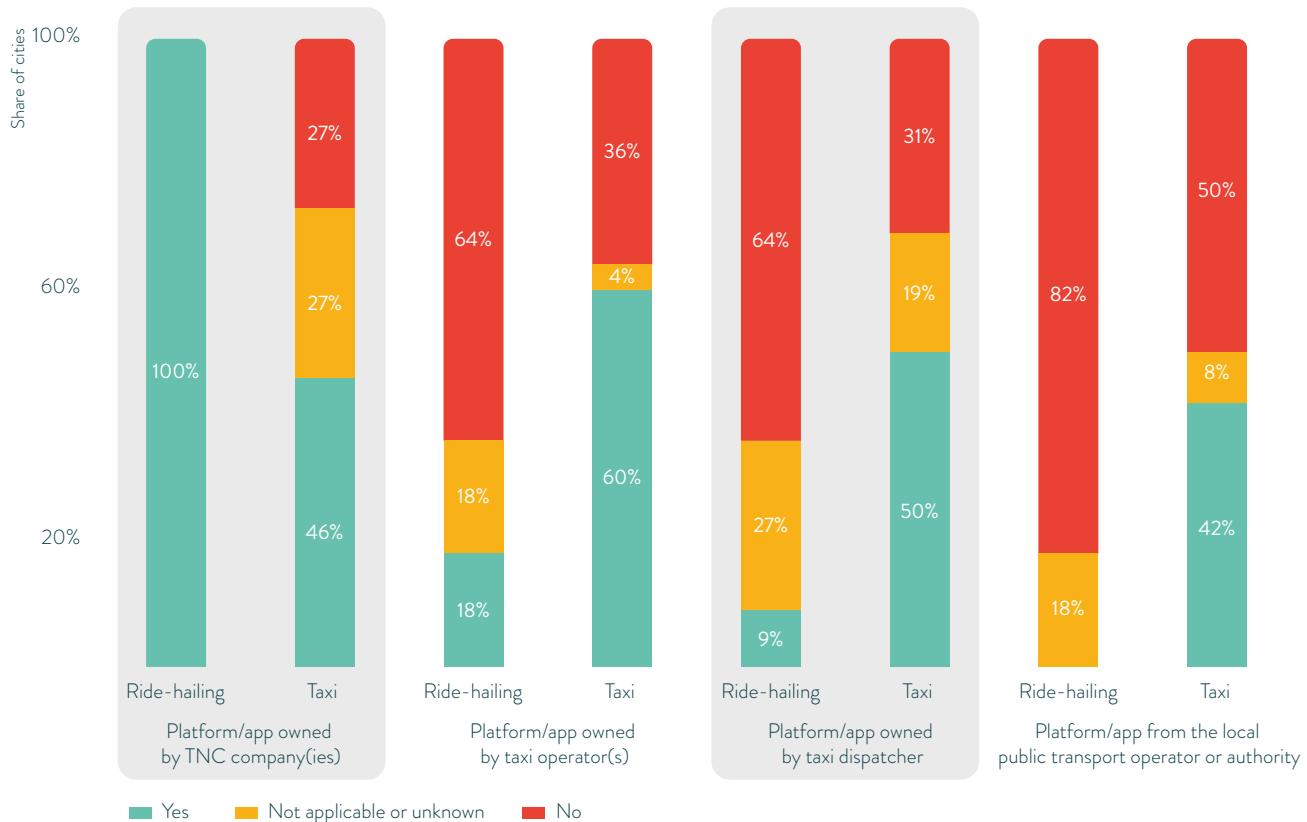
Digitisation is one of the cornerstones of the ride-hailing business model. However, taxis have quickly caught up by adopting **digital platforms**. According to most of the survey respondents, taxi services in their cities are now available on platforms (Figure 11). Taxis can be present on multiple platforms: those owned by taxi opera-

tors (60%), taxi dispatchers (50%), and TNCs (46%). 42% of respondents also stated that taxi services are integrated into platforms managed by the local public transport operator or authority in their cities, while ride-hailing services have no such integration. Overall, ride-hailing services seem to be more dependent on individual TNC platforms and less present in other platforms (18% in apps owned by taxi operators and 9% in dispatchers' apps).

Do the digital platforms for taxi and ride-hailing services offer additional services? According to the respondents, yes. Taxi platforms primarily provide links to ride-hailing services and PT (46% of the cities), while ride-hailing platforms offer, in order of importance, non-mobility services (e.g. delivery in 73% of the cities) and access to shared vehicles like electric scooters (e-scooters) (36% of the cities). They also provide links to taxi services. In 45% of the cities, taxi and ride-hailing platforms are linked.

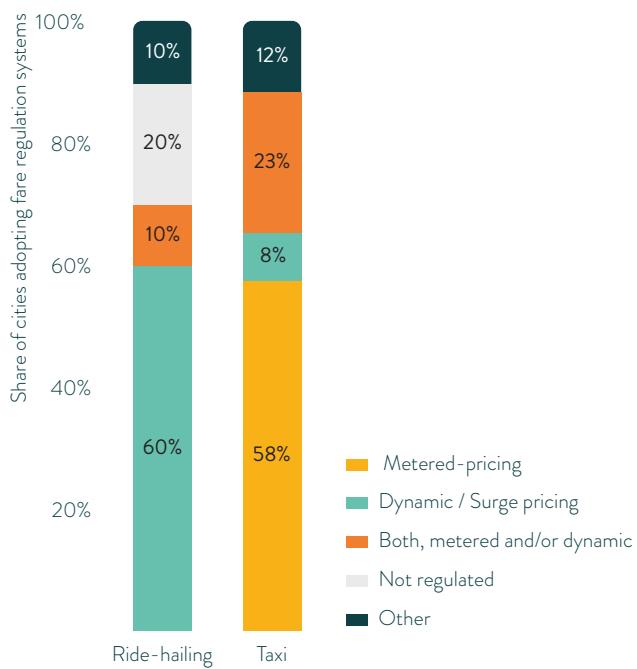
Taxi fare calculation is predominantly done via taximeters, with only a small percentage of respondents (19%) saying that smartphones are allowed as alternative meters. Consequently, the taxi fare regulation system is still largely based on a metered system, which is calculated based on an initial fare, time, and distance (Figure 12¹⁵ and Figure 13).

Figure 11 - Types of digital platforms with taxi and ride-hailing services



15 In Figure 11, 12 and 13, taxi figures cover 26 respondents; ride-hailing figures cover 11 respondents.

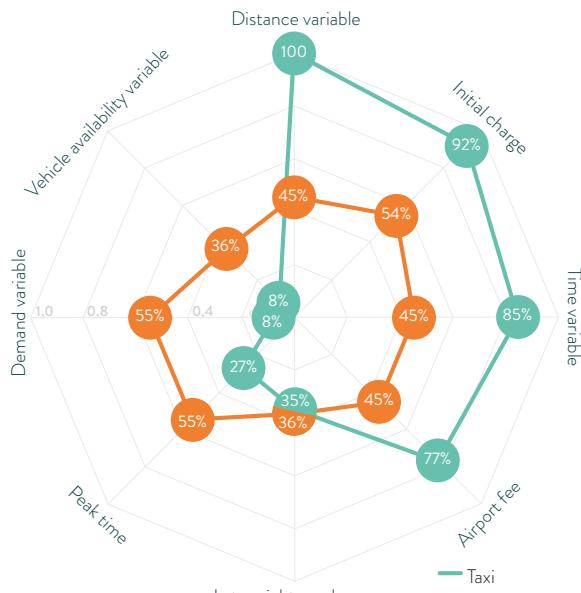
Figure 12 - Fare regulation system adoption, 2023



However, 23% of respondents said that taxis in their cities are now able to also have dynamic pricing, which is indicative of structural changes in taxi regulations and markets.

Ride-hailing service fares are either not regulated (20%) or primarily regulated via dynamic pricing models (60%). Ride-hailing fares, like taxi fares, are based on an initial fare, time, and distance, to which they add demand, peak times, and vehicle availability variables.

Figure 13 - Fare criteria adoption, 2023



EVOLVING ROLE IN MOBILITY

When looking at the integration of on-demand services with PT, taxis show better results (Figure 14). In half of the cities surveyed, there is some sort of integration between PT and taxis, while only 36% of the cities have any type of integration with ride-hailing. The main forms of integration concern the digital integration in multimodal journey planners, sometimes including booking, and special fares for trips to or from a PT hub.

The importance of integration with PT is also underlined by the favourable opinion of the respondents (public authorities). Only 8% (taxis) and 27% (ride-hailing) of respondents believe the on-demand modes should not be integrated into the PT system.

Taxi and ride-hailing services play a vital role in **inclusive on-demand services** for groups with specific needs (Figure 15), such as transport for people with reduced mobility, women, children, and the elderly, non-emergency medical transport, and deliveries. Furthermore, taxi and ride-hailing services are sometimes contracted by public entities to provide such services.

Regarding services for people with reduced mobility, **vehicles** that are **wheelchair accessible** are particularly important. However, their number varies across the cities surveyed, going from 32% of the taxi fleet in New York to 0.2% in Dubai (average 10%), with only two thirds of the cities surveyed offering at least one wheelchair accessible vehicle.

Figure 14 - Taxi and ride-hailing service integration with PT, 2023

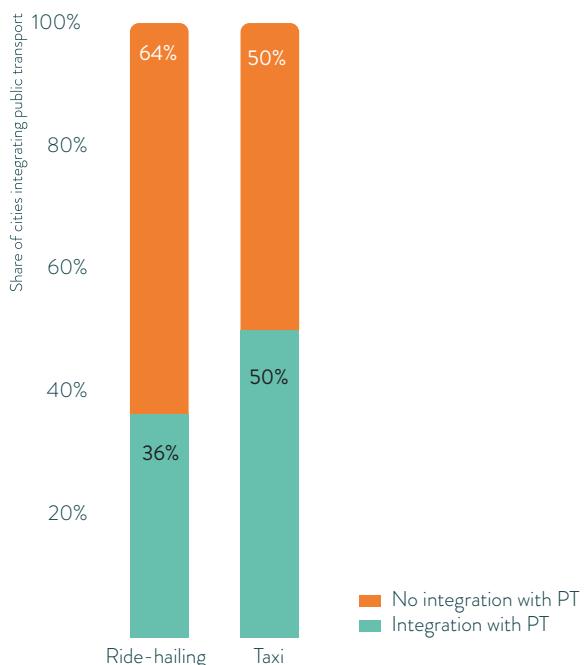
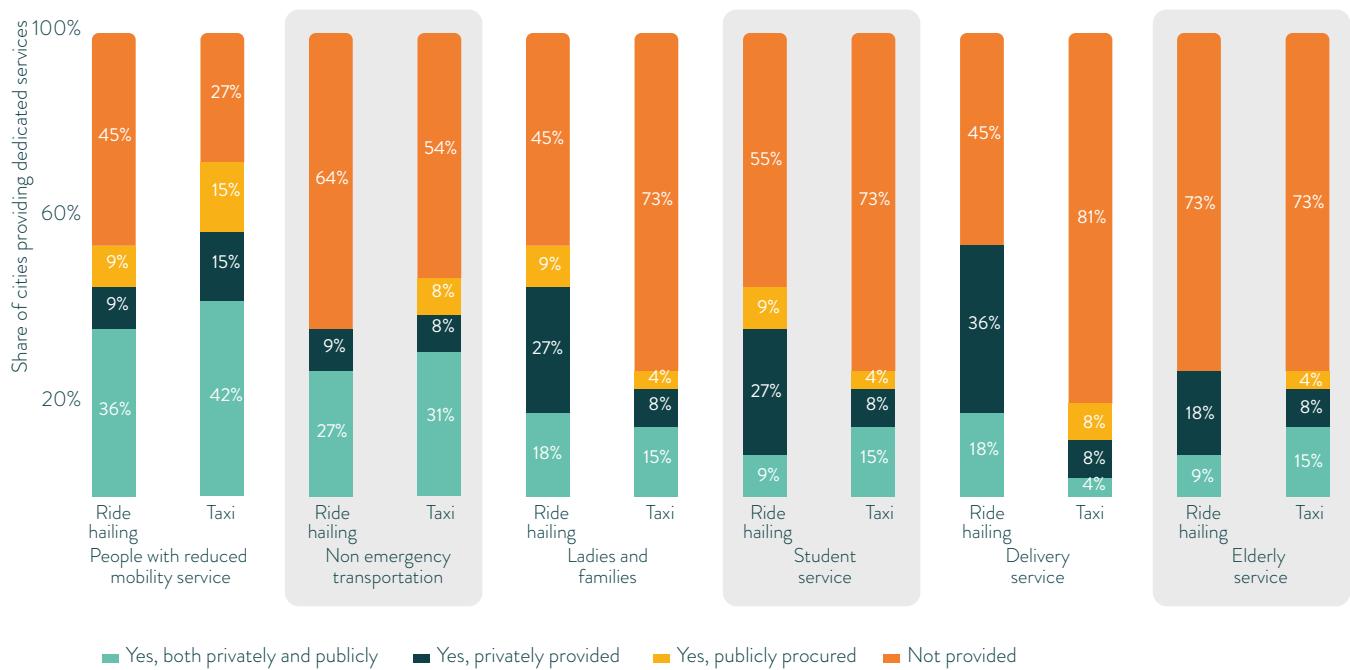


Figure 15 - Dedicated services provided via taxi and ride-hailing, 2023

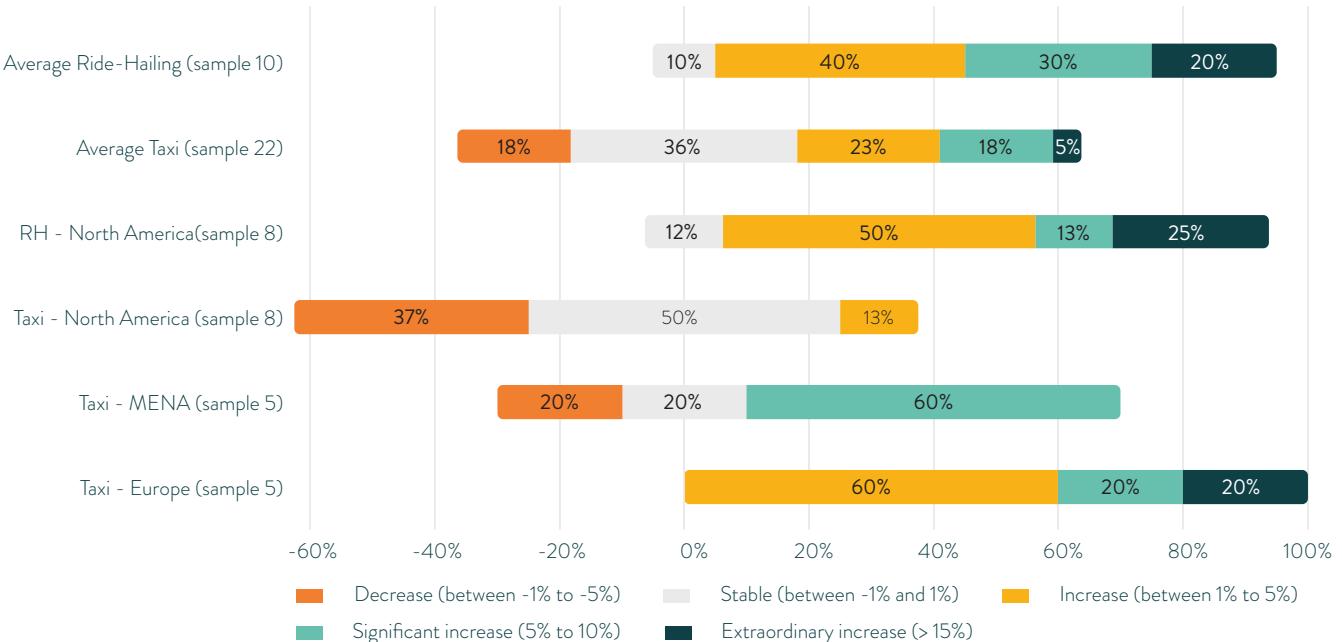


The share of wheelchair accessible vehicles in the ride-hailing fleet is zero, or close to zero, for most cities, except New York, where 9% of ride-hailing vehicles are wheelchair accessible. Further work needs to be done by all stakeholders to improve the inclusiveness of on-demand mobility services.

OUTLOOK FOR THE TAXI AND RIDE-HAILING SECTOR

Finally, it is important to look at the immediate future of the taxi and ride-hailing sector. 46% of respondents expect an increase in taxi demand, and 90% expect an increase in ride-hailing demand (Figure 16). There are significant regional differences, with the increase in taxi demand expected to be particularly significant in Europe, whereas North America will drive ride-hailing growth.

Figure 16 – Respondents' opinion: What evolution are you anticipating of taxi and ride-hailing demand over the next two years (2024-25) compared to 2023



The top three factors impacting demand over the next two years, for both taxi and ride-hailing, are the growth of urban attractiveness and tourism, fare increases, and new digital booking and payment options.

Other important factors that could impact taxi demand include the availability of more on-demand mobility services like ride-hailing in a given area, policies that restrict private cars, driver shortages, and investments to boost the PT modal share.

On the other hand, the demand for ride-hailing is expected to be more sensitive to the possibility to share trips, and new, active mobility habits and lifestyles, including reduced need to travel.

Finally, the introduction of autonomous vehicles and the reduction of urban speed limits are not expected to have a significant impact on either service in the short term.

CONCLUSION

Our study shows a picture where digitisation is already a reality in the mobility sector. The sector shows encouraging but slow progress towards cleaner vehicles, more inclusive services, and a diverse workforce, as well as greater integration with PT. Growth in demand is expected for both taxi and ride-hailing services over the next 2 years.



Photo by Nubia Navarro from Pexels

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This Statistics Brief was prepared by the UITP secretariat within the framework of the activities of the On Demand Mobility Committee. For more information, please contact bruno.mesquita@uitp.org.

