



# A Study on Passengers' Behavior Towards Ola and Uber Cab Services in India

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## ABSTRACT

*This study examines passengers' behavior towards services provided by UBER and OLA in Haryana India. Passengers' behavior is measured with the SERVQUAL dimensions, namely passenger satisfaction, reliability, responsiveness, tangibility and assurance. This study adopts a descriptive research design and convenience sampling to collect primary data from users of Uber and Ola in Haryana. A total of 121 responses were collected from users of Ola and Uber for analysis purpose. In this subject, various statistical analyses such as frequency distribution, ANOVA, reliability tests, and factor analysis were applied to examine the perception and satisfaction of passengers. Findings indicate that user's satisfaction varies across different service attributes and is influenced by service quality dimensions such as reliability, responsiveness, tangibility, assurance. Particularly, driver behaviour and route knowledge emerge as critical determinants of passenger satisfaction. Study concludes that improvement in service quality mainly in driver's professionalism and operational efficiency can lead to higher passengers' satisfaction and also can make stronger brand recognition of Ola and Uber cab services in both rural as well as urban areas in India.*

**Keywords:** Customer Satisfaction, Service Quality, OLA & UBER Cabs Services

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## INTRODUCTION

The service sector is the biggest supplier to India's GDP. Since economic liberalization, industries such as banking, healthcare, education, software, media and communication, and transportation have experienced significant growth and now hold a major share of the Indian market (Ashish 2019). With applications like Ola and Uber linking drivers and passengers for effective, on-demand service, technological advancements have completely changed the taxi sector (Ghosh 2018). Reasonable taxi fares and the convenience of booking through mobile applications are the main factors driving the growth of the online taxi booking sector worldwide. The introduction of e-hailing taxi apps such as Ola, Uber, and Lyft, has transformed taxi services and become one of the most significant innovations in the transportation industry (Banerjee et al. 2020). Urban transport has been transformed by ride-sourcing apps, which are easy to use and deliver an inclusive route data

and convenience. Millions of people frequently use them, and their popularity is still growing worldwide (Technavio, 2020). Without owning vehicles or hiring drivers, these services are successful because they use cellphones and GPS to provide clear pricing and real-time information (Akram 2021).

### Tracing the Growth of Ola: A Modern Mobility Revolution

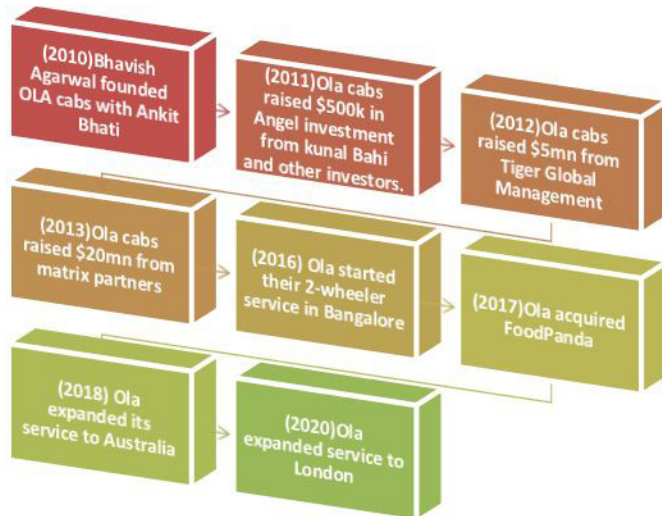
Since its 2010 start in India, Ola has transformed urban transportation by matching passengers and drivers using a smartphone app to provide quick, reasonably priced trips (Das et al., 2019). Ola, an Indian ride-hailing company, started its operations in 2010 and rapidly expanded across major cities in India. Its services include various types of transportation, such as cabs, auto-rickshaws, and even bikes in some regions. Ola's focus on providing affordable and convenient rides quickly gained popularity among commuters.

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**Figure 1:** Milestones in Ola's Growth

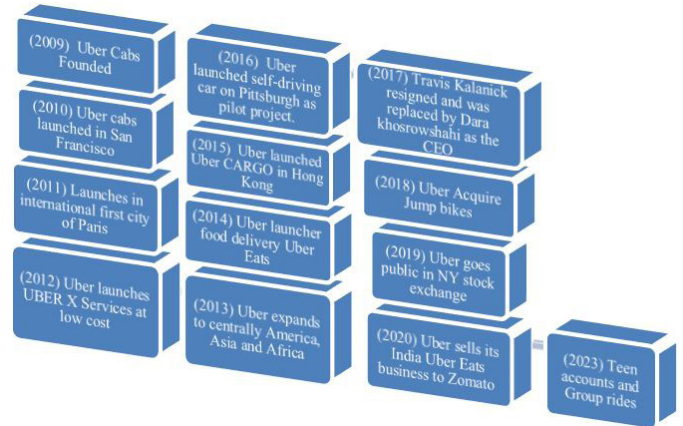
Source: Compiled by the author's

The chart shows how Ola Cabs has expanded from its establishment in 2010, including significant investments from Tiger Global and Matrix Partners, and how it became a unicorn in 2015 after acquiring TaxiForSure. By introducing two-wheelers in 2016 and purchasing Food Panda in 2017, Ola broadened its offerings Ola.<sup>1</sup> India's taxi-hailing market is valued at greater than \$40 Billion. The market is probable to grow at a CAGR of 6.3% between years 2022-2024. This growth is expected to occur because of changing travel preferences and the rising disposable income of consumers. (Kumar & Banerjee2023).

### Tracing the Growth of Uber: A Modern Mobility Revolution

Uber was established in the United States in 2009 and became well-known around the world by providing easy, cashless ride-booking via its mobile app. It entered India in 2013 and offers a range of transportation choices, including bikes, cars, and taxis. Uber swiftly rose to prominence in India's ride-hailing industry because to its aggressive pricing (Kim et al., 2021). Considering regulatory obstacles, Ola and Uber have successfully served commuters in Haryana. Uber has helped with environmental initiatives and employment creation throughout the world. For example, it has used trip-based donations to help with Cape.<sup>2</sup> Uber investigated self-driving vehicles, introduced

services including Uber Eats and Uber CARGO, and expanded internationally between 2013 and 2017.<sup>3</sup> Dara Khosrowshahi assumed leadership following the resignation of CEO Travis Kalanick in 2017.<sup>4</sup>



**Figure 2:** Milestones in Uber's Growth

Source: Compiled by the author's

### Objectives

In view of the rising number of online cab users in Haryana this research is intended to understand the passenger's satisfaction regarding Ola and Uber users. Research is mainly focused on working professionals. The objectives of this study are as follows:

- To analyses Behaviour of online cab users for different categories of respondents as per their demographics (Gender, Age, Residing Area, Education, and Qualification).
- To identify inherent facets that impact perception of Ola & Uber services among users.
- To study the relationship between passengers' satisfaction with reliability, responsiveness, tangibility and assurance.

### Research Questions

To accomplish the goals mentioned above, the following is a list of the primary research questions:

1. How does the behaviour of online cab users differ across various demographic groups, including gender, age, residing area, education, and qualification?

<sup>1</sup> <https://startuptalky.com/startup-story-ola/>

<sup>2</sup> <https://www.uber.com/en-ZA/blog/what-is-uber-facts/>

<sup>3</sup> <https://blog.infinitecab.com/uber-business-model-how-it-works/uber-timeline-6/>

<sup>4</sup> <https://www.uber.com/en-ZA/blog/what-is-uber-facts/>

2. What are the major underlying factors that form users' perceptions of Ola and Uber services?
3. What is the relationship between passengers' satisfaction and the four SERVQUAL dimensions, reliability, responsiveness, tangibility, and assurance?

## REVIEW OF LITERATURE

### Review on Users of OLA Services

Ashish (2019) examined the relationship between the tangible and intangible dimensions of service quality and customer satisfaction for OLA cabs in Delhi NCR. It was found from the research that Ola cab services needs to improve in Delhi NCR in the area of Intangible facets, i.e. responsiveness, assurance and empathy, etc. Jayanti et al. (2024) explored the reason for preferring Ola cabs and variable that associate with satisfaction level of users. It was revealed that gender, residing area and qualification had significantly associated with satisfaction level of cab users. They suggest for mobile apps and other motivating facilities for the uses to attract passengers for increase awareness. Manjunath (2015) studied on OLA Cabs, convenience, affordability, and dependability are the main determinants of client preferences, awareness, and satisfaction. Study found that in Bengaluru, OLA has successfully established its brand, outperforming rivals like Uber and Meru Cabs.

Niranjana & Sneha (2023) examined the elements that influence Ola Cabs' use in Coimbatore, with a particular emphasis on driver behavior, safety, satisfaction, and marketing tactics. Tariff, comfort, convenience, service quality, and customer care were proven to influence consumer in Coimbatore city. Koushimithran & Sugnaya (2023), Coimbatore taxi services provide excellent service quality. Velmurugan et al. (2019) highlighted that price consciousness and consumer perceptions affect choices, underscoring the rising significance of app-based taxi services like Ola in smart cities. Ola's advantages increased its appeal in Salem, but sustained success depends on providing.

### Review from the Point of View of UBER Services

Bappy and Haque (2018) found that in Dhaka, drivers' performance had the biggest influence on Uber passenger satisfaction, followed by cost, accessibility, comfort, and safety. According to Suhami et al. (2018),

ICT features, cost, convenience, and safety all influence user satisfaction and repeat use. According to Murad et al. (2019), responsiveness, tangibility, and assurance are the next most important aspects of service quality, after reliability. Rajesh (2021) discovered that Mumbai Uber clients place a high value on speed, convenience, pricing, promos, and driver conduct, male in particular favour quick service. Kim et al. (2021) demonstrated that enjoyment, promotions, and usefulness boost satisfaction, but expenditure, risk, and emotional factors such as anxiety diminish it.

### Review from the Point of View of OLA & UBER Services

Research on ride-hailing services constantly recognizes important features that influencing platform preference and user satisfaction in a variety of scenarios. Sharma & Das (2017) and Khade & Patil (2018) observed that basic service quality facets like reliability and responsiveness highly impact consumer perceptions, while Ghosh (2018) further found the role of tangibility and certainty in shaping passenger experiences. Yamuna et al. (2019) further state that customers' choice of taxi services is significantly influenced by technology-enabled features, knowledgeable drivers, promotional offers, and overall service quality, illustrating the transformation of the Indian taxi industry from a disorganized to an organized structure. In terms of app use, price, safety, and brand positioning, platforms like Ola, Uber, and Pathao offer different advantages, according to comparative research by Ghosh (2018), Amutha et al. (2024), and Patel et al. (2023). Perceived value, self-efficacy, and service quality as significant elements promoting ongoing usage, particularly among older users (Akram et al., 2024), while Shah & Kubota (2022) confirm that satisfaction favorably impacts future usage intentions. Overall, the literature emphasizes a transition toward a technology-driven ride-hailing ecosystem where dependable service, user-friendly apps, and consistent client experience foster happiness and loyalty.

From the literature review and Table 1, it is evident that very few studies have specifically focused on passengers in Haryana, even though many national and international studies have examined service quality dimensions such as reliability, responsiveness, tangibility, and assurance in app-based ride-hailing

**Table 1:** Summary of Systematic Reviewed Research Papers

| <i>Author</i>                  | <i>Title</i>                                                                                                                         | <i>Data</i>                   | <i>Data Analysis</i>                                                           | <i>Findings</i>                                                                                                                                                                                                                             |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shah & Kubota (2022)           | “Passenger’s satisfaction with service quality of app-based ride hailing services in developing countries: Case of Lahore, Pakistan” | Primary Data                  | Exploratory Factor Analysis, mean, SD,                                         | It was discovered that users’ intentions to use the app-based ride-hailing service again were positively impacted by their level of satisfaction with the service.                                                                          |
| Prasad et al. (2021)           | A study on customer satisfaction on usage of private taxis with reference to Coimbatore town.                                        | Primary Data                  | Rank analysis, Weighted average analysis, Chi-square analysis                  | The findings depicted the customer’s mindset and satisfaction with call taxi services in Coimbatore.                                                                                                                                        |
| Banerjee et al. (2020)         | Measuring service quality of on-demand.                                                                                              | Primary Data                  | Factor Analysis, Mean, SD, Chi-square analysis                                 | The study found that when creating strategies, attention should be paid to the four qualities of assurance, responsiveness, empathy, and reliability.                                                                                       |
| Amutha (2024)                  | A comparative study towards the service provided by Ola and Uber                                                                     | Primary Data & Secondary Data | Percentage Analysis, Chi-square Analysis                                       | Both cars’ service quality results are same, and businesses can improve them in the near future by responding more positively to their business.                                                                                            |
| Velmurugan et al. (2019)       | “Customer perception and problems towards Ola services in smart cities with reference to Salem”                                      | Primary Data & Secondary Data | Percentage method, Henry Garrett Ranking                                       | The study comes to the conclusion that, because of the many advantages they offer passengers, app-based taxis are becoming more and more common, even in cities.                                                                            |
| Kousikmithran & Suganya (2023) | “Customer satisfaction towards online cab booking with special reference to Coimbatore city.”                                        | Primary data                  | Percentage Analysis                                                            | Showed that half of the passengers in Coimbatore are willing to utilize taxis instead of using the public transit system, and they do not consider the cost of cab services.                                                                |
| Suhami et al. (2018)           | “Service attributes, customer satisfaction, and return usage: A case of Uber Malaysia.”                                              | Primary data                  | SPSS 23.0 (Cronbach’s alpha, mean, standard deviation & Multiple regression)   | Found that Uber’s Four service features- Price, Convenience, Safety, & ICT were determined highly significant predictors of consumer satisfaction.                                                                                          |
| Khuong & Dai (2016)            | “The factors affecting customer satisfaction and customer loyalty-a study of local taxi companies in Ho Chi Minh City, Vietnam.”     | Primary data                  | Reliability method, Factor analysis, correlation, and regression.              | Demonstrated that consumer loyalty was directly impacted by pricing, satisfaction, responsiveness, and reliability. Furthermore, comfort and cost had an indirect impact on client loyalty via the mediation of satisfaction                |
| Akram et al. (2024)            | Hey boomer, “your ride has arrived”: Are you willing to continue using the ride-hailing app?                                         | Primary data                  | structural equation modelling (SEM) and the model was evaluated using AMOS 23v | Using the mobile technology acceptance model (MTAM), it was found that baby boomers’ continuous usage intention toward ride-hailing applications had moderating (self-efficacy and service quality) and mediating (perceived values) roles. |
| Murad et al. (2019)            | The correlation between customer satisfaction and service quality in Jordanian Uber & Careem.                                        | Primary Data                  | SERVQUAL model                                                                 | Results showed that reliability was the most crucial component for customer satisfaction it is followed by responsibility, tangibility, and assurance.                                                                                      |

services. Due to differences in lifestyle, infrastructure, digital usage, traffic conditions, and passenger expectations, their findings cannot be directly applied to Haryana. Moreover, no comprehensive study has explored how these four SERVQUAL dimensions actually influence passengers' satisfaction and behavioural intentions in Haryana's urban and semi-urban regions. Local factors such as road conditions, driver's behavior, driver availability, waiting time, travel cost, and safety perception also remain largely unexamined. Therefore, a clear research gap exists in understanding how reliability, responsiveness, tangibility, and assurance shape the overall experience and satisfaction of passengers using app-based ride-hailing services in Haryana.

## RESEARCH METHODOLOGY

The research methodology is presented in this section along with the target population, sampling framework, sample size, data collection instrument, data gathering methods, data analysis techniques, and results presentation techniques.

Based on respondents-to-item ratio method adequacy of sample size was determined. Previous researchers like Gorchus (1983) and Everitt (1975) recommended a minimum of 5-10 responses per question in questionnaire item for factor analysis. Since this study contains 22 items minimum required sample size can be 110-220. Therefore, final sample size 200 is adequate for further analysis. It is an exploratory study with an sample size 200 Ola and Uber cab users were targeted for the data collection purpose, however only 180 responses were collected from the survey. 60 responses were rejected due to incompleteness, missing values and inaccurate data. Finally 121 responses were considered for the analysis purpose that was accurate and reliable. The response would have been better if the questionnaire had been converted to local language.

To enhance the understanding and acceptability of this study, both primary and secondary data is used for analysis purpose. The primary data was gathered using a structured questionnaire that included closed-ended questions about the user's behavior. A Google form questionnaire was delivered to responders via social media and phone apps, i.e. WhatsApp, LinkedIn, and Instagram respondents. The researchers collected

secondary data by reviewing various publications regarding Uber service and passenger happiness, as well as relevant press stories, reports, magazines and research papers/articles, blogs, newspapers, thesis, books, etc.

For categorical data, descriptive and frequency analyses were applied to the data. Reliability analysis is performed on scaled-ordered data before applying ANOVA to test different hypotheses and running out factor analysis. New variables resulting from factor analysis were further subjected to regression analysis. The values of the Bartlett test, KMO, and reliability coefficient are also computed to do factor analysis.

## RESULT AND DISCUSSION

This section presents the analysis of primary data collected via a structured questionnaire. It begins with descriptive statistics of demographic profile, followed by, results of testing various hypotheses with respect to demographics for assess relationship between demographic and key study construct. The section then presents result of factor analysis and testing of hypotheses of latent service quality dimensions such as reliability, responsiveness, tangibility, assurance and their influence on passengers' satisfaction. Finally regression analysis is conducted to evaluate the overall service quality of these dimensions on passengers' satisfaction.

### Descriptive Statistics of Demographics

The demographic profile shows that most respondents are male (67.8%), while females are 32.2%. The majority of respondents (94.2%) are between the age group of 20-35 years, with just 5% of respondent's lies in 35-55 year age group and 0.8% lies above 55. In terms of education, 57% holding bachelor's degree, 24.8% holding master's degree, 15.7% have completed high school education, and 2.5% have taken vocational courses. Regarding occupation, majority of the respondents 54.5% are students, followed by 36.4% full-time employee, part-time employee (6.6%), pensioners (1.7%), and least are homemakers (0.8%). This data indicate that the survey predominantly represents the perspectives of young educated male students.

**Table 2:** Frequency Distribution of Demographics of Respondents

| Gender   |           | Age(years)     |            | Education          |           | Profession         |           |
|----------|-----------|----------------|------------|--------------------|-----------|--------------------|-----------|
| Category | Frequency | Category       | Frequency  | Category           | Frequency | Category           | Frequency |
| Male     | 82 (67.8) | 20-35 years    | 114 (94.2) | High school        | 19 (15.7) | Full-time employee | 44 (36.4) |
| Female   | 39 (32.3) | 35-55 years    | 6 (5.0)    | Bachelor's degree  | 69 (57.0) | Part-time employee | 8 (6.6)   |
|          |           | 55 years above | 1 (0.8)    | Master's degree    | 30 (24.8) | Student            | 66 (54.5) |
|          |           |                |            | Vocational courses | 3 (2.5)   | Retired            | 2 (1.7)   |
|          |           |                |            |                    |           | Homemaker          | 1 (0.8)   |
| Total    | 121 (100) | Total          | 121 (100)  | Total              | 121 (100) | Total              | 121 (100) |

Figure in brackets presents percentage of data.

Source: Compiled by author(s)

### Reliability Coefficient, KMO, Bartlett Test of Sphericity

Prior to factor extraction, sample appropriateness evaluated using the KMO, Bartlett's Test of Sphericity and Cronbach's alpha needs to perform for measuring reliability and accuracy of internal consistency of data. Therefore these test are applied on the dataset and the results are in Table 3. These findings support the use of exploratory factor analysis in this study.

**Table 3:** Reliability Coefficient, KMO, and Bartlett Test Output

| Reliability Coefficient                      | Cronbach's Alpha | KMO   | Bartlett Test                                    |
|----------------------------------------------|------------------|-------|--------------------------------------------------|
| Independent variables (all 4 dimensions)     | 0.961            | 0.937 | Chi-square – 2157.823, DF = 231, p-value = 0.000 |
| Dependent variable (passengers satisfaction) | 0.928            | 0.760 | Chi-square – 287.102, DF = 3, p-value = 0.000    |

Source: Compiled by Author(s)

The reliability and validity results from table 3 shows that the measurement scales used in the study are highly consistent and appropriate for conducting factor analysis. For the overall scale consisting of 22 items across four factors, a Cronbach's alpha of 0.961 indicates excellent internal consistency, while a KMO value of 0.937 demonstrates strong sampling adequacy. The Bartlett's test ( $\chi^2 = 2157.823$ ,  $p < 0.001$ ) further confirms that the data have sufficient correlations to justify factor analysis. While Passenger Satisfaction achieves excellent reliability ( $\alpha = 0.928$ ), KMO is acceptable 0.760 with significant result of Bartlett test. Overall, these statistical results validate that the measurement scales are consistent, reliable, and robust

for further multivariate analyses, including factor analysis and other analysis.

### Data Reduction/Factor Analysis & Regression Analysis

The findings of the factor analysis of 22 statements are shown in this part, descriptive factor analysis, and regression analysis between the dependent variable, and independent variable.

#### Factor Analysis

A total of 22 statements were utilized to extract four independent variable variables, with 22 statements on customer satisfaction serving as the dependent variable. Table 4 shows that independent components were extracted using a fixed number of factors (4) rather than eigenvalues  $\geq 1$ . One factor for customer satisfaction was identified using the eigenvalue  $> 1$  criteria in Table 5. For dependent variable only one factor appeared, hence the rotational component matrix and communalities were not calculated. Tables 4 and 5 provide details on the variance caused by these variables.

The principal component analysis in table 4 indicates that the first four components do not have eigenvalues greater than 1 and together account for 72.37% of the total variance, showing that they capture most of the information in the dataset. Following rotation in table 5, the variance is more evenly distributed across these components, with each contributing between 12.54% and 21.62%, thereby improving interpretability. These results suggest that the dataset can be effectively summarized using four meaningful factors, suitable for further analyses.

**Table 4:** Factor Analysis – Total Variance Explained (22 statement)

| Component | Initial Eigenvalues |               |            | Extraction Sums of Squared Loadings |               |            | Rotation Sums of Squared Loadings |               |            |
|-----------|---------------------|---------------|------------|-------------------------------------|---------------|------------|-----------------------------------|---------------|------------|
|           | Total               | % of Variance | Cumulative | Total                               | % of Variance | Cumulative | Total                             | % of Variance | Cumulative |
| 1         | 12.215              | 55.523        | 55.523     | 12.215                              | 55.523        | 55.523     | 4.757                             | 21.624        | 21.624     |
| 2         | 1.956               | 8.892         | 64.415     | 1.956                               | 8.892         | 64.415     | 4.744                             | 21.562        | 43.187     |
| 3         | 0.956               | 4.345         | 68.760     | 0.956                               | 4.345         | 68.760     | 3.661                             | 16.640        | 59.827     |
| 4         | 0.794               | 3.608         | 72.368     | 0.794                               | 3.608         | 72.368     | 2.759                             | 12.541        | 72.368     |
| 5         | 0.716               | 3.253         | 75.621     |                                     |               |            |                                   |               |            |
| 6         | 0.627               | 2.850         | 78.471     |                                     |               |            |                                   |               |            |
| 7         | 0.601               | 2.731         | 81.201     |                                     |               |            |                                   |               |            |
| 8         | 0.517               | 2.349         | 83.550     |                                     |               |            |                                   |               |            |
| 9         | 0.481               | 2.189         | 85.739     |                                     |               |            |                                   |               |            |
| 10        | 0.388               | 1.764         | 87.503     |                                     |               |            |                                   |               |            |
| 11        | 0.379               | 1.722         | 89.225     |                                     |               |            |                                   |               |            |
| 12        | 0.337               | 1.530         | 90.755     |                                     |               |            |                                   |               |            |
| 13        | 0.307               | 1.396         | 92.151     |                                     |               |            |                                   |               |            |
| 14        | 0.302               | 1.373         | 93.524     |                                     |               |            |                                   |               |            |
| 15        | 0.248               | 1.128         | 94.652     |                                     |               |            |                                   |               |            |
| 16        | 0.229               | 1.041         | 95.693     |                                     |               |            |                                   |               |            |
| 17        | 0.217               | 0.987         | 96.679     |                                     |               |            |                                   |               |            |
| 18        | 0.189               | 0.858         | 97.538     |                                     |               |            |                                   |               |            |
| 19        | 0.157               | 0.714         | 98.252     |                                     |               |            |                                   |               |            |
| 20        | 0.144               | 0.655         | 98.907     |                                     |               |            |                                   |               |            |
| 21        | 0.137               | 0.624         | 99.530     |                                     |               |            |                                   |               |            |
| 22        | 0.103               | 0.470         | 100.000    |                                     |               |            |                                   |               |            |

Source: Compiled by Author(s)

**Table 5:** Factor Analysis – Rotational Component Matrix and Communalities

| S.No. | F1    | F2    | F3    | F4    | Communality |
|-------|-------|-------|-------|-------|-------------|
| S1    | 0.589 |       |       |       | 0.667       |
| S2    | 0.798 |       |       |       | 0.764       |
| S3    | 0.770 |       |       |       | 0.762       |
| S4    | 0.812 |       |       |       | 0.814       |
| S5    | 0.743 |       |       |       | 0.759       |
| S6    | 0.662 |       |       |       | 0.753       |
| S7    | 0.610 |       |       |       | 0.779       |
| S8    |       |       |       | .0588 | 0.762       |
| S9    |       |       | 0.669 |       | 0.623       |
| S10   |       | 0.683 |       |       | 0.648       |
| S11   |       |       |       | 0.693 | 0.809       |
| S12   |       |       |       | 0.523 | 0.622       |
| S13   |       | 0.574 |       |       | 0.664       |
| S14   |       |       | 0.655 |       | 0.720       |
| S15   |       | 0.700 |       |       | 0.734       |

| S.No. | F1 | F2    | F3    | F4 | Communality |
|-------|----|-------|-------|----|-------------|
| S16   |    | 0.738 |       |    | 0.790       |
| S17   |    | 0.542 |       |    | 0.583       |
| S18   |    | 0.657 |       |    | 0.702       |
| S19   |    | 0.610 |       |    | 0.705       |
| S20   |    | 0.694 |       |    | 0.697       |
| S21   |    |       | 0.585 |    | 0.799       |
| S22   |    |       | 0.741 |    | 0.764       |

Source: Analysis of primary data collected by authors.

Factor loadings show substantially align with SERVQUAL dimensions such as S1- S7 shows strong loading reliable to factor 1 (F1), i.e. reliability. Factor 2 reflects responsiveness through statements S10, S13 and S15-S20. Factor 3 corresponds to tangibility to S9, S14, S21 and S22, followed by factor 4 assurance with statements S8, S11 and S12. Communality values ranges between 0.583-0.814 which shows that each item is adequately explained by the extracted factors.

### Descriptive Analysis of Factors Designated as Independent and Dependent Variables

This section provides a descriptive analysis of four components retrieved as a result of factor analyses concerning various demographics, as well as p-values. Cab companies should increase vehicle aimed using the t-test and Analysis of Variance (ANOVA). Table 6 presents the results of the analysis.

- **Demographic Gender:** It can be inferred from the p-values given in table 6 that Passengers satisfaction, reliability, responsiveness, tangibility, assurance are perceived different by male and female respondents.
- **Demographic Age:** It is inferred from the p-values given in table 6 that Passengers satisfaction, reliability, responsiveness, tangibility, assurance are perceived significantly different by the respondents of four age groups.

- **Demographic Educational Qualification:** It is inferred from the p-values given in table 6 that, reliability, responsiveness, tangibility, assurance are perceived significantly different by the respondents of four educational qualifications but for Passenger Satisfaction for all four educational qualification groups are at par and data did not exhibit a statistically significant difference.
- **Demographic Employment status:** It can be inferred from the p-values given in table 6 that Passenger satisfaction and Frustration are perceived significantly different by the respondents of four employment status groups but for Promotional Benefit factor all four employment status groups are at par and data did not exhibit a statistically significant difference.

The demographic analysis indicates that gender and age have no significant impact on any service quality dimensions, as all p-values exceed 0.05. Educational

**Table 6:** Mean Perception Score Values of the Respondent as per Gender, Age, Educational Qualification, and Employment Status of Uber Cab Passengers

|                                        |                  |                |                  |                        |                |         |
|----------------------------------------|------------------|----------------|------------------|------------------------|----------------|---------|
| Demographic: Gender                    |                  |                |                  |                        |                |         |
| Factors                                | Male (82)        |                | Female (39)      |                        | P-value        |         |
| Reliability                            | 0.06 ± 0.93      |                | -0.14 ± 0.20     |                        | 0.307          |         |
| Responsiveness                         | -0.01 ± 0.10     |                | 0.03 ± 0.17      |                        | 0.828          |         |
| Tangibility                            | -0.04 ± 0.11     |                | 0.08 ± 0.17      |                        | 0.549          |         |
| Assurance                              | 0.00 ± 0.12      |                | -0.00 ± 0.14     |                        | 0.986          |         |
| Demographic: Age in years              |                  |                |                  |                        |                |         |
| Factors                                | 20-35yr. (112)   | 35-55yr. (23)  | 55-Above yr. (4) |                        | P-value        |         |
| Reliability                            | -0.04 ± 0.00     | 0.17 ± 0.172   | -0.08 ± 0.96     |                        | 0.914          |         |
| Responsiveness                         | 0.84 ± 0.00      | 0.10 ± 0.15    | -0.01 ± 0.09     |                        | 0.680          |         |
| Tangibility                            | 1.07 ± 0.00      | 0.01 ± 0.49    | -0.01 ± 0.09     |                        | 0.563          |         |
| Assurance                              | -0.25 ± 0.00     | -0.12 ± 0.33   | 0.00 ± 0.09      |                        | 0.924          |         |
| Demographic: Educational qualification |                  |                |                  |                        |                |         |
| Factors                                | High School (25) | Bachelors (73) | Masters (30)     | Vocational Courses (3) |                | P value |
| Reliability                            | -1.25 ± 0.86     | -0.42 ± 0.26   | 0.19 ± 0.08      | 0.16 ± 0.22            |                | 0.004*  |
| Responsiveness                         | -0.53 ± 0.82     | 0.27 ± 0.19    | -0.06 ± 0.12     | -0.12 ± 0.21           |                | 0.321   |
| Tangibility                            | -0.30 ± 0.48     | 0.10 ± 0.18    | 0.05 ± 0.13      | 0.01 ± 0.22            |                | 0.865   |
| Assurance                              | 0.19 ± 1.32      | -0.14 ± 0.18   | 0.08 ± 0.12      | -0.11 ± 0.17           |                | 0.711   |
| Demographic: Employment status         |                  |                |                  |                        |                |         |
| Factors                                | Full-Time (61)   | Part-Time (12) | Student (54)     | Retired(2)             | Homemaker (12) | P value |
| Reliability                            | -0.25 ± 0.00     | 0.81 ± 0.81    | 0.16 ± 0.09      | 0.23 ± 0.35            | -0.24 ± 1.91   | 0.207   |
| Responsiveness                         | -2.56 ± 0.00     | -0.67 ± 1.50   | -0.02 ± 0.09     | -0.90 ± 0.59           | 0.28 ± 0.14    | 0.001*  |
| Tangibility                            | 2.64 ± 0.00      | 0.34 ± 0.73    | 0.04 ± 0.11      | -0.53 ± 0.44           | 0.03 ± 0.15    | 0.045*  |
| Assurance                              | -1.93 ± 0.00     | -1.28 ± 1.03   | -0.07 ± 0.12     | 0.22 ± 0.55            | 0.16 ± 0.15    | 0.060   |

Source: Compiled by the author(s)



the study's findings may not be generalizable to the entire population of Ola users, given the use of convenience sampling. Convenience sampling is one of the major limitations of the study as it may lead to a sampling bias.

From a managerial point of view, these insights suggest that service providers need to go beyond traditional quality measures to boost both revenue and customer happiness. Few of the approaches that can be applied to encourage diversity and trust include offering in-car services, ensuring transparent pricing policies, incorporating advanced security features like audio recording and motion sensors, and increasing the number of female drivers etc. (Arora et. al., 2024).

While this study offers useful recommendations for enhancing operational strategies, its findings are limited to Haryana. Future study should look at larger and more diverse geographies and demographic groups to have a better knowledge of customer satisfaction, behavior and service performance in India.

## REFERENCES

- Ashish, D. K. (2019). Concrete made with waste marble powder and supplementary cementitious material for sustainable development. *Journal of cleaner production*, 211, 716-729.
- Akram, U., Lavuri, R., & Mathur, S. (2024). Hey boomer, "your ride has arrived": Are you willing to continue using the ride-hailing app?. *Journal of Retailing and Consumer Services*, 77, 103678.
- Amutha, P.V., Abishisth K.P. & Lingeaswari. S. (2024). Comparative study towards the service provided by Ola and Uber, *International Research Journal of Modernization in Engineering Technology and Science*, 6(02), 874-880
- Arora, K., Zheng, F., & Girotra, K. (2024). Private vs. pooled transportation: Customer preference and design of green transport policy. *Manufacturing & Service Operations Management*, 26(2), 594-611.
- Banerjee, S. P., Saha, S., Jain, D., & Rao, S., (2020). Measuring service quality of on-demand ride services, *International Journal of Management (IJM)*, 11(10), 11-22
- Bappy, T. A., & Haque, S. S. (2018). Examining the factors affecting passengers' satisfaction with Uber car services: evidence from Dhaka City. *Management*, 32(1).
- Ghosh, M. R. *APP CAB SERVICE QUALITY IN THE CITY OF JOY*. Archers & Elevators Publishing House.
- Goyal, A., & Singh, N. P. (2007). Consumer perception about fast food in India: an exploratory study. *British food journal*, 109(2), 182-195. <https://doi.org/10.1016/j.ijatssr.2021.12.006>.
- Jayanti, P., Poongodi, S., & Bharathi, P. D., (2024) Customers' satisfaction towards ola cab. *UGC Care Group 1 Journal*, 51(1), 101-107
- Khade, A. A., & Patil, Dr. V. (2018). A study of customer satisfaction level of Ola and Uber paid taxi services with special reference to pune city, *International journal of management, technology and engineering*, 8(8), 1596-1603
- Khuong, M. N., & Dai, N. Q. (2016). The factors affecting customer satisfaction and customer loyalty--a study of local taxi companies in Ho Chi Minh City, Vietnam. *International journal of innovation, management, and technology*, 7(5), 228.
- Kim, J. H., Nan, D., Kim, Y., & Park, M. H. (2021). Computing the user experience via big data analysis: a case of Uber services, *CMC-Computers Materials & Continua*, 67(3), 2819-2829
- Kousikmithran, P., & Suganya, Dr. P. (2023). customer satisfaction towards online cab booking with special reference to coimbatore city pra, *International Journal of Research and Development (IJRD)*, 8(7), 15-18
- Kumar, S., Verma, R., & Singh, P. (2023). Emerging trends and challenges in the Indian ride-hailing industry. *Journal of Transport and Logistics*, 10(2), 45-58.
- Kumar, S., & Banerjee, A., 2023. Ola success story – How Ola became india's leading cab aggregator publisher on august 11, 2023. Retrieved on may 15, 2024. From : <https://startuptalky.com/startup-story-ola/>
- Mangunath, G., (2015). "Brand Awareness and Customers Satisfaction towards OLA Cabs in Bengaluru North and South Region". *Research journal of social science & management*, 05(5), 172-177
- Murad, S., Al-Kayem, A., Manasrah, A., Halemah, N. A., & Qusef, A. (2019). The correlation between customer satisfaction and service quality in Jordanian Uber & Careem. *International Journal of Innovative Technology and Exploring Engineering*, 8(12), 5186-5192.
- Niranjana, D., & Sneha, M. (2023). A Study on the Consumer Perception towards Using Ola Cab Service with Special Reference to Coimbatore City. *International Journal of Research Publication and Reviews*, 4(10), 1110-1114
- Patel, K. A., Kumar, S., Shivesh, S. R., Ravi, N., Sneha, P., & Priyaadharshini, G. (2023). A study on consumer preference on online cab services, *International journal for innovative research in multidisciplinary field*, 9(02) 347-351
- Prasad, M. A., & Krithika, P. (2021). A study on customer satisfaction on usage of private taxis with reference to Coimbatore town, *International journal of creative research thoughts (IJCRT)*, 9(04), 4013-4020

- Rajesh, R. (2021). Study Of Customer Experience and Uses Of Uber Cab Services In Mumbai. *International Journal of Application or Innovation in Engineering & Management*, 10(6), 050-061.
- Shah, A., Kubota, H., 2021. Analyzing travelers' attitude towards ride-hailing services in developing countries: Case of Lahore, *Pakistan. IATSS Research*.
- Shah, S. A. H., & Kubota, H. (2022). Passenger's satisfaction with service quality of app-based ride hailing services in developing countries: Case of Lahore, Pakistan. *Asian Transport Studies*, 8, 10007
- Sharma, K., & Das, S. (2017). Service quality and customer satisfaction-with special focus on the online cab industry in India. *International Journal of Business and Management*, 12(7), 192-200.
- Suhaimi, M. Z. A., Talib, S. A., Bachok, S., & Saleh, M. M. (2018). Service attributes, customer satisfaction, and return usage: A case of Uber Malaysia. *Journal of Tourism, Hospitality & Culinary Arts*, 10(2), 81-103.
- Technavio, 2020. Ride hailing services market by type and by region – global opportunities & forecast, 2020-2024 Businesswirefrom <https://www.businesswire.com/news/home/20201124005672/en/Ride-Hailing-Services-Market-by-Typeand-by-Region-%E2%80%93-Global-Opportunities-Forecas>
- Velmurugan, J., Senthil, R., Shruthi, S.&Rajkamal, V.(2019). Customer Perception and Problems towards Ola Services in Smart Cities with Reference to Salem. *Rupkatha Journal on Interdisciplinary Studies in Humanities* 11(3) Volume 9, Issue 5 May 2021, ISSN: 2320-2882
- Yamuna, S. M., Vijayalakshmi, R., Jeeva Mani, K., Boopathi, D., & Ranjith Kumar, P. (2019). A progressive study on users perception and satisfaction towards online cab service with reference to Coimbatore. *International Journal for Research in Applied Science & Engineering Technology*, 7(IV), 156-157.
- Everitt, B. S. (1975). Multivariate Analysis: The Need for Data, and other Problems. *British Journal of Psychiatry*, 126(3), 237–240. doi:10.1192/bjp.126.3.237.
- Gorsuch, R. L. (1983). *Factor analysis* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

## APPENDIX

### Nomenclature of Statements/Variables/Parameters

| Statement | Description of Statements                                                                                                  | Loaded on   |
|-----------|----------------------------------------------------------------------------------------------------------------------------|-------------|
| S1        | I trust the service to deliver its promises consistently                                                                   | Reliability |
| S2        | The service performs reliably even during peak demand.                                                                     | Reliability |
| S3        | I feel confident that the service will maintain its quality over time                                                      | Reliability |
| S4        | I have faith in the service's ability to resolve issues efficiently.                                                       | Reliability |
| S5        | I am satisfied with the consistency of service provided by Ola & Uber cab services                                         | Reliability |
| S6        | Prompt service is provided by drivers of helplines.                                                                        | Reliability |
| S7        | Drivers or apps inform riders when services occur.                                                                         | Reliability |
| S8        | Good cab service providers are always willing to listen to riders complaints and improve various facets of their services. | Assurance   |
| S9        | The vehicles used by the riders are in good condition.                                                                     | Tangibility |

|     |                                                            |                |
|-----|------------------------------------------------------------|----------------|
| S10 | Ride-sharing apps are visually appearing.                  | Responsiveness |
| S11 | The functions of the apps are easy to find and operate.    | Assurance      |
| S12 | The cabs have a GPS system.                                | Assurance      |
| S13 | The cab drivers are neat in appearance and courteous.      | Responsiveness |
| S14 | Drivers respond to request.                                | Tangibility    |
| S15 | Drivers are trustworthy.                                   | Responsiveness |
| S16 | You feel safe in dealings.                                 | Responsiveness |
| S17 | Cab services provide 24*7 services to the customer.        | Responsiveness |
| S18 | The behavior of the cab drivers always satisfactory.       | Responsiveness |
| S19 | Cabs driver give each riders individualized attention.     | Responsiveness |
| S20 | Drivers understand rider's needs.                          | Responsiveness |
| S21 | Drivers have knowledge of the usual transports.            | Tangibility    |
| S22 | The service operates at convenient hours.                  | Tangibility    |
| CS1 | Overall, I am satisfied with the services.                 | Satisfaction   |
| CS2 | Being a customer of services have been good choice for me. | Satisfaction   |
| CS3 | Service offers me good solutions.                          | Satisfaction   |