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Users Willingness to Pay for Careem App Transportation in Pakistan: A Case Study of District Faisalabad

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Abstract: *The use of Ride-hailing services like Careem and Uber has increased nowadays. The Careem service operates in different cities of Pakistan. The objective of this study was to estimate the user's willingness to pay for the App-based transportation of Careem in the district of Faisalabad. To achieve the aim of this study, primary data were collected from App-based users through a well-designed questionnaire. Interviews were conducted in this regard from 140 users of the Careem App collected, randomly selected in three localities in district Faisalabad. i.e. Government College University Faisalabad, University of Agriculture Faisalabad and Sheikh Colony Faisalabad. The study suggested that the government should promote such kinds of facilities based on Apps and make investments. It not only facilitates the users but also creates employment opportunities.*

Key Words: Willingness to pay, App-based transportation, CAREEM, Binary logistic model, Faisalabad

JEL Classification:

Introduction

Nowadays, transportation is recognized as an important segment and it has an important role in the development of socio-economic activities. In Pakistan, there are many opportunities to get benefits from the innovation of the transport division to enhance the growth of the economy. The transportation sector plays a significant role in the development of any economy. The transportation sector modifies all other sectors that not only control but also enhance the socio-economic well-being of the citizens in control (Easteal et al., 1991). To maintain efficient, adequate and effective public transport in Pakistan, governance and urban planning are very important. Public transportation in Pakistan has different kinds like wagon or bus, which provides very poor service and also a low level of comfort. In Lahore and Karachi, non-motorized trips still exist, and a continuous shift from non-motorized to motorized modes is encouraged as cities are being expanded. Because of the low level of the service of public

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transportation, people living in larger cities with higher incomes prefer private vehicles either car or motorcycle for travelling. In most cities, there are many factors that have contributed to the increasing trend of using private vehicles and decreasing public transportation. Continuous investment in roads is one of the important factors, in most of the cities of developing countries it left very few or no funds for the provision of public transportation (Imran, 2009). At the present time, the transport system is changing at a fast pace. Information and communication technologies, along with other roles facilitate the availability of the data of location and smartphone applications (Apps), presenting particular opportunities and all-over-the-place formation of new transportation services. One of the most increasing and contentious forms of shared- mobility services, on-demand ride-sharing services also recognized as ride-hailing, ride-sourcing or transportation network companies (TNCs), like Uber and Lyft in the market U.S. Transport researcher, has a limited ability to determine the possible impacts relate with the expansion in the use of on-demand ride-sharing services. One of the reasons is the inadequacy of the data of users about themselves, the ways of using the ride-hailing services, and the travelling behaviour changes that the use of ride-hailing services produces. A further reason is the heterogeneity in the characteristics of the users of this service (Alemi et al.,2018). Smartphone applications are software applications that are operated on smartphones and other mobile devices. Commonly, applications are known as mobile apps or Apps. In this technologically advanced era, people are using Apps in both their personal and professional lives. In the transportation sector, mobile applications also play an important role, as they provide transport services to users via Apps to have their rides. These apps provide commuters with arrival times, stop locations, and vehicle delays for transit agencies and station facility information (e.g. fare, lift toilets etc). These applications allow the users to choose the route depending on many factors such as length of the route, speed and grade. Smartphone applications that are designed for carpooling or ride sharing in real time are needed. About 10% of the commuters in the U.S. use a ride-sharing everyday carpool or as casual carpoolers. Ride-sharing contributes Increase in travel options, a reduction in parking demand and mainly a reduction in the cost of transport. Ride-sharing apps match drivers and riders with a common origin or destination. Some Smartphone applications allow real-time ride-sharing and therefore on the way to the destination drivers pick up the riders. To support matching payments, and for some background checks, smartphone applications require users to be registered (Siuhi,2016). CAREEM is a ride-sharing and Transport Company which is based in Dubai, United Arab Emirates, operates in the Middle East, and South Asia and Africa. As of December 2016, CAREEM was estimated at US$ 1 billion after a US$ 350 million acquisition by Saudi Telecom, the state-owned Telecommunications Company of Saudi Arabia and Rakuten, the Japanese investment firm. As of the time Saudi Telecom owned 10% of CAREEM transport (Kamran et al.,2019). In Pakistan CAREEM is the internet platform for the greater Middle East region including mass transportation, delivery and payments, and services growing across the platform to become the regular super App of the world.It wasestablishedinJuly2012, and was acquired by UBER in 2019. Transport Company CREEM has created one million employment opportunities in the region and runs in 100 cities over 14 countries (Careem,2019). Ride-sharing and transport company CAREEM entered in late 2015 in the market, and in mid-2016 Uber entered the market thereafter.Acommuterinstantlyonaride-sharingAppcan requests a ride, through the smartphone devices connecting to the internet, just by clicking the button. Calling a cab with the application one has to share information on personal data including the name, location and phone number, the handling of real-time data privacy regarding concerns has been increased. It is important to effectively take into account the privacy policies these companies espouse.The Pakistan Digital Rights Foundation (DRF) is at

the forefront of the rights of internet issues and has recently worked on the rights to privacy and digital surveillance in Pakistan. Uber, CAREEM, Air BnB and other companies use their business models as important components of mobile applications and website presence. Allowing the ordinary people proponents of the sharing economy models to say that they are entrepreneurs and they also generate wealth that allows people to use their own properties (vehicles or home models). The government of Punjab moved to ban Uber and CAREEM, in January 2017, after the issue of a notification that reported, that in Lahore two ride-sharing or ride-hailing services were operating outside the regulatory boundaries. The Sind provincial government quickly picked the notification and in Karachi, the services of the two companies were stopped. This notification was instantaneously issued to the PTA to cease the operations of Uber and CAREEM App and also mentioned that these "must take fitness certificate" (Kamran et al.,2019). Careem piloted delivery of parcel service in the cities of Karachi, Islamabad and Peshawar when it branched out its network services. Customer will be able to send, track and receive small products through this inexpensive delivery service, such as keys, pickups of pharmacy, documents, laundry etc. through the introduction of the service of Careem's vision of expanding into an ecosystem of technology and offering solutions to their customers for their day-to-day challenges through digital technology. Now customers easily choose the car in their Careem App for delivery and pick up the location that customers need to deliver including the the drop-off location. Careem has hired and trained captains other than those operating in its ride-hailing fleet in order to provide users with good quality service. Also, the service is significantly more economical than a form of passenger vehicle. Careem will not only facilitate its customers but also in the country creating more jobs, eventually affecting the growth of economy of the Pakistan. The network of Careem is spread in Pakistan across 15 cities and growing (Careem, 2018). The transport sector contributes 10 per cent share of GDP in Pakistan (GOP, 2022).The Careem service operates in different cities in Pakistan. The service has been operating in Lahore, Islamabad, Faisalabad, Hyderabad, Gujranwala, Quetta, Bahawalpur, Sukkar, Karachi, Peshawar, Multan, Abbottabad, Sialkot, Sargodha and Multan (CAREEM, 2020).The Careem has invested $150 million in Pakistan and created 1 million job opportunities within its network. The company claimed that it would enable more than 250,000 entrepreneurs through the CareePartnerss' program (Tech Desk, 2017).

Objectives of Study

To study the socio-economic characteristics of the respondents.

To estimate the respondent's willingness to pay for CAREEM transport.

To give policy recommendation

Review of Literature

Hospodka (2014) examined the detailed analysis of the aspects of negative and positive for aircraft electric taxing. The study focused on the economic impact of using an electric taxi system and estimated the possible savings and costs. The study identifies several possible threats which had connected to introducing these kinds of systems to the operations of aircraft. The study used the variables of time savings, fuel savings, and average engine maintenance cost and estimated the results by using sensitivity analysis. The study concluded that when some technical obstacles occur which refused by the electric taxi manufacturers to address, which showed the meaning that the performance of the electric taxi system for ensuring safe and sustainable grounds is not sufficient.

Stiglicet al., (2015) investigated the ride-sharing system introduction of the meeting points

and the potential benefits. Studies showed riders would be picked up or dropped off at their destination where they want to go with the introduction of meeting points in the ride-sharing system. Also, the study showed without the number of stops that riders need to go, increasing flexibility leads to more feasible among riders and drivers which

allows the matching of multiple riders by the drivers. The meeting points in the system of ride-sharing study implemented the algorithm which matches the drivers and the rider optimally at a large scale. To assess the meeting point's benefits had performed extensive study. Results of the study revealed that in the ride-sharing system, the meeting points had significantly increased the participants of matching and saving the driving distance systemwide.

Wallsten (2015) explored the greatest competition and the effects on the industries of taxi to ride-sharing systems by using a dataset from the city of New York taxi and study showed more than a billion riders of NYC taxi of Limousine Commission, from New York complains of the taxi also from Chicago and the popularity information of the greater ride sharing system or services Uber. From the trends of Google, a study showed the raised in the use of the sharing economy had created more competition in many industries mostly for hotels through taxis and Airbnb and through the services of ride-sharing like Lyft, Uber or Sidecar. The study found that by monitoring the underlying patterns and factors that could impact taxi services, the increased success of Uber was associated with a decrease in passenger complaints per New York taxi ride. Ube's success in Chicago was associated with decreased complaints of particular kinds about taxis which included the machines of broken credit cards, heating and air conditioners, conversations on cell phones and rudeness. Calculating the changes in the surplus of consumers or deriving the effects data was not been making it possible, and results provided evidence that Uber had created more ways for riders who may have complained to the regulators and motivated taxi drivers for the new competition to improve services.

Watanabe et al., (2016) analyzed that Uber had used the disruptive digital-technology-driven business model to explain a ride-sharing revolution and the platform of the company's ecosystem architecture. The findings of the study included the emergence of un-captured GDP corresponding to a two-faced nature of ICT of co-existing development trajectory and this emergence could be a substitute from taxi to Uber vicious cycle differ from between increase in price and a decline in trips of taxi and virtuous cycle between price decrease and a rise in trips of Uber. The study also showed that virtuous cyclecanbeself-propagatingfunctioninspinoff from traditional co-evolution to new co-evolution which plays an important role. To explain the success behindtheUberresearcherusedthethreemegatrendsofICT advancement, change in people's preferences and a change in paradigm. Results showed that a noteworthy element had been a well-functioning platform of eco-system architecture in transportation but also essential for other institutes related to business.

Diega and Jacovella (2016) examined some important factors that contributed to obtaining the trust of the users' platforms of internet-based like Uber which provides services technological related. It clarified that internet internet-based future could not be a success for the European Commission without the users' trust in the online platforms. The study explored the legal and non-legal representation of a web of Uber's relationships with some different types of users including the partners of drivers, riders of the vehicles, web developers and business users. The study analyzed the presentations of Uber's legal and non-legal norms of services provided, the policy of privacy, and communication through the greater community ofUberecosystemsuchasblogsforumsetcwhich exploredhowawarenesswithtransparence and collectively could play a vital role in sustaining the trust of The users. The study concluded that tensions were created within the market and users' trust was undermined because of the opacity of the legal structure of a corporation. The author suggested to get the users' trust and ensure fairness between the representative legal and non-legal Uber must ensure consistency and legally give the transparence approach.

Chang (2017) empirically examined the impact of the services of Uber on taxi drivers'

performance economically as an illustration by using a case study in Taiwan. Due to scarce data availability not many of empirical evidence has been provided. The study used the difference in difference modelbyusinthe gdatabas eo the npopulatio no f29,43 4driver so ftaxis.The study results indicated that regular taxi drivers reduced because Uber also revenue of drivers by 12% in the initial years and in the third year of entry Uber reduced by 18%. The study suggested the substitute relationship between taxi operations and the service of Uber. Moreover, the study showed that Uber's negative impact was more pronounced among the members of the taxi motorcade which showed that Uber competing with passengers of taxis who had used electronic devices to call the service of rides. By looking at capacity utilization and operating miles evidentthatUber'snegativeimpactondriversoft axiservicerevenuehadbeenassociatedwith the decline in taxi drivers' operating miles. The study concluded that to cope with competition from Uber, drivers of taxis are more likely to advertise in or on the cab taxi and provide better services of rides.

Watanabe et al.,(2016) examined the presentative foundations of different achievements and disappointments in Uber's global growth. Uber had thriven expansion worldwide to done 479 cities in additional countries 75 worldwide in June of 2016. In the research study author used the ICT-driven business descriptive model (IBDM) established by Uber the top jewel of ICT. This paper examined the official foundations opposing achievement and disappointment in Uber's global development. The result suggested the meaning of IBDM by a combined trial towards common request it was established by an adaptation transformative a played part in that achievement.

Akimove et al., (2020) examined transport network companies also referred to App-based on demand and ride-sharing services had gained momentum. In the sector of the traditional taxi, this phenomenon created debate in the media and faced heated reactions. On transport systems, this phenomenon is still under research in the literature of scholars. Studies showed there is a dearth of evidence of the impact on the traditional taxi system of these services. This article in Spain fills the gap in the literature by empirically analysing the effect on TNCs which this phenomenon had fiercely opposed. The study conducted analyses of the economic situation of financial 416 Spanish companies of traditional taxis. The finding showed a negative significant impact of new competitors on the profit revenues of the traditional taxi system in Madrid and Barcelona but did not affect the other indicators and in the initial stage of TNCs areas of analysis. The study suggested the implications for stakeholders which include managers in the sector of traditional, policymakers, and investors had discussed further research of potential avenues.

Liu et al., (2022) examined the machine learning-based techniques for on-demand ride-hailing services. The study had shown on-demand ride-hailing importance and highlighted the spatial-temporal dynamics data of urban traffic. The study demonstrates the value of guiding operation, design, control and planning with machine learning based on macro-level rode-hailing services. Study summarized travel behaviour from the users' perspective, mobility patterns included carpooling behaviour.

Hussain Shah and Kubota (2022) examined the essential factors which affect user's satisfaction and intention to use ride-hailing services in the future through the finding of a questionnaire in Lahore Pakistan. The study analyzed 865 user's data by using exploratory factors and a structural model. The results showed that shown quality of app-based services is positively related to users' intention to continue using the service in future. The study also explained that satisfaction mediates the relation between quality attributes including system, service, reliability and professionalism attributes.

Vizuete-luciano et al., (2023) analyzed the increased dimensions of urban mobility and incorporated new ones and taxi options most

importantly in urban mobility. The study explained the current urban state and its mobility carrying out bibliometric analysis. The results identified the recurring topic which showed the academic development of urban mobility, ride-sourcing, carpooling and other services.

Methodology

A proper methodology must be selected after the research objectives mentioned and it must be according to the objectives. For this study, the purpose sampling was used. Overall, 140 respondents participated (60 from Government College University Faisalabad, 60 from University of Agriculture Faisalabad, and 20 were the household area of Sheikh Colony Faisalabad) were interviewed for data collection. The users were randomly collected for the interview. The objective of the study is to measure the socio-economic characteristics of the respondents and their willingness to pay of the users for App-based transportation of Careem. The data were carried out by SPSS and Excel.

Contingent Valuation Method

In the contingent valuation method, one of the most important concepts is the willingness to pay. Individuals are asked to state their maximum level of willingness to pay or minimum willingness to accept under the scenario of a hypothetical market. Willingness to pay is the 'maximum amount that consumers are ready to pay for goods and services. Willingness to pay is the amount of money that people are willing and able to pay for goods and services like transportation. Theoretically originated the CVM surveys by Ciriary-Wantrupand first time it was implemented by Davis in its study of the Maine backwoods area. However, the CVM development in Pakistan was started long ago

Binary Logistic Regression Model

The binary logistic regression model was used because responses for WTP were in the form of 'yes'' and 'no''. In econometrics, logistic regression, or logit regression, or logit model is a regression model, where the endogenous variable is categorical in the form of yes or no (1 or 0). A logistic regression is used that covenants with circumstances in which the practical outcome for the explained variable (Y) can have only two probable types. This model was chosen for the reason of its capability to pact with a dichotomous explained variable and deep-rooted theoretical background.

The general form of binary logistic regression is:

Ln (y=1)/ (y=0)= βo+β1*X1+ β2*X2+ β3*X3+…+ βn*Xn

In which

(Y=1)=Po: users are willing to pay more for App-based transportation of Careem

P(Y=0) =1-Po: users are not willing to pay more for App-based transportation of Careem

Ln Po/1-Po = Ln (pay) / (not pay) β1*X1+ β2*X2+ β3*X3+… βn*Xn

In this model I, the model is simplified and illustrated by the below formula:

$$Y= \beta o+ \beta i* Xi+\mu i$$

Where:

Y= dependent variable takes 1 if the answer is "yes" and takes 0 if the answer is "no"

Xi = is the independent variable, β is the intercept of the regression

μi is the error term

Bi= β1, β2, β3… βn are the coefficients of the models which indicate changes in the dependent variable by the change in the independent variable.

(Dependent Variable) Y=Willingness to pay WTP for Careem,

(Independent Variable) X1= gender X2= Income X3 = education X4 = Nature of Profession X5 = average RS. Spent on Careem per month X6 = Careem Charges reasonable X7 = Careem vehicles in better condition

Willingness to pay Estimation

The value of the WTP is in the binary choice form as a dependent variable, in the format of dichotomous choice of contingent valuation

method. For the better facilities of the App-based transportation, ask the individuals whether they would be willing to pay specific additional charges (up to 5 Rs, to more than 20 Rs) with the specific response "YES" and "NO". Further consideration of participation in willingness to pay as a function of the prices offered and the characteristics of the user i.e. age, education, income, occupation etc. therefore OLS cannot be used since the dependent variable was dichotomous. A logistic regression model pursued as the dependent variable is dichotomous, to estimate willingness to pay (Hanemann 1984). For the estimation of the WTP binary logistic model is used. The Binary Logistic Model is indicated as:

$$P_i/(1-P_i)=(1+\exp(Z_i))/(1+\exp(-Z_i))$$

As the above equation is non-linear, it can be linearized by taking the natural log, and then the given Model is

$$L_i=L_n((Z_i))/(1-P_i)\ Z_i$$

$$Y=\beta_o+\beta 1X1+\beta 2X2+\cdots\cdots+\beta_iX_i+\varepsilon_i$$

Where $p_i/(1-p_i)$ is the probability that the user will be willing to pay for having the better facilities to the probability that the user is not willing to pay. The dependent variable is binary so it has two values 1 and 0. If a user is willing to pay then its value is given 1 and those who are not willing to pay have the value of 0.

The vector for the explanatory variable is Y, (x_i) includes the socioeconomics variables and charges paid per month. Intercept is shown by the sign β_o, β_i shows the coefficients of the variable the estimated parameters and the random error is shown by the sign ε_i.

Explanatory Variables and Signs

Explanatory variables that are given below:

Table 1

Explanatory Variables and Signs

Name of Variable	Sign
Gender (Male / Female)	+
Income (Rs)	+
Education (Years)	+
Nature of Profession (Yes / No)	+
Average spent on Careem (Rs)	+
Careem charges reasonable (Yes / No)	+
Vehicles of Careem better condition (Yes / No)	+

Table 1 shows the explanatory variables' descriptions with their expected signs. The expected sign of the variable gender is positive because it is assumed that the females would be more willing to pay for the App-based transportation of Careem due to easy availability. The explanatory variable of education is also expected to be positive and shows more education more people will be willing to pay than less educated people and education appears to be an important variable. Income is expected to be positively affected by the willingness to pay for the App-based transportation of Careem and expected that more of the income more will be the willingness to pay.

We expect that the average spend per month on the use of Careem will be positively affected showing that more of the average Rs. spent on Careem per month will be the willingness to pay. The better condition of the Careem in comparison to other transport expected to be positively affect more the better condition of the vehicles of Careem more will be the willingness to pay. Charges Reasonability of the Careem in comparison to the other transport is also expected to be positively affected and more will be the willingness to pay.

Results

Table 2

Descriptive Statistics of the Respondents

Variables	Mean	Std. Dev.	Minimum	Maximum	Kurtosis	Skewness	Observation
Income	60457.14	34721.16503	10000	200000	1.596842964	1.134527187	140
Education	15.61	3.06	5	21	-0.050543	0.856383	140
Nature of Profession	0.585714286	0.494367036	0	1	-1.903647606	-0.35178932	140
Average spent on CAREEM	1231.5	951.8145677	100	3500	-0.750766363	0.650422878	140
CAREEM Charges	0.764285714	0.425968457	0	1	-0.421515702	-1.258853502	140
Vehicles of CAREEM better condition	0.735714286	0.44253544	0	1	-0.844293036	-1.080728969	140

Table 2 shows the descriptive results on average the respondents' mean income on a monthly basis is 60457.14, standard deviation of 34721.16. the respondent sample education mean value is 15.61, the nature of profession mean value is 0.58 and the average spent on CAREEM on a monthly basis is 1231.5. As per the respondents' sample, the mean value of CAREEM charges is reasonable in comparison to other App-based services like Uber is 0.764. the mean value of CAREEM vehicles is in better condition in comparison to local vehicles and Uber vehicles is 0.735. The nature of the profession of the respondents' sample is 0 minimum value show other profession including Govt employee, own business, retired and household whereas the maximum value of 1 are for students who mostly use the CAREEM app service. The respondent's sample of the CAREEM charges is reasonable in comparison to other minimum values 0 are for other services reasonable charges and a maximum of 1 for CAREEM App services are reasonable charges. Vehicles of CAREEM services are in better condition in comparison to others.

Table 3

Final Results from Binary Logistic regression Model for user's willingness to pay for App Base Transportation of Careem

Variables	Description	Coefficient	P-Value
Dependent Variable	WTP (YES/NO)	-	-
CONTSANT	(Intercept)	-5.885	0.000
Gender	1 for females and 0 for male	0.913	0.092*
Education	Number of years of formal edu	0.144	0.081*
Income	Rs.	0.000	0.001 ***
Nature of Profession	1 for (student) 0 for (others	0.874	0.058**
Average spent on CAREEM	(Rs.)	0.000	0.088 *
CAREEM Charges	1 for (reasonable) 0 for (other	0.166	0.75

Variables	Description	Coefficient	P-Value
Vehicles of CAREEM better condition	1 for (Yes) 0 for (No)	1.045	0.041 **
	***Significance at 1%;	**Significance at 5%;	*Significance at 10%

Table 3 shows that Mostly the variables have the signs of expected results. The prediction of the model is 80 per cent. Significant probability of the willingness to pay which is influenced by the variables is gender, income, education, average Rs spent on Careem per month, reasonability of the Careem charges as compared to other transport (taxi, rickshaw) and Careem in better condition in comparison of other transport. All of these variables positively change the probability. All these variables are significant shows that have the influence to determine the user's willingness to pay for the App-based transportation of Careem.

However, the coefficient for gender according to the logit regression model is positive as expected, significant at the 10% level of confidence, at the value of 0.092. In the given questionnaire, 1 refers to males and 0 refers to females. Coefficient for the education is positive and significant at the level of 10% and implies that more the educated respondents more they will be willing to pay.

The results also explain the coefficient on the household income is statistically significant at 1% Confidence level with the positive coefficient sign. By increasing the income of the users chances of willingness to pay increase by the associated values of the odds ratio which is 0.001. This may be the reason that by increasing household income, users may have more money so there is more chance of willingness to pay for the App-based transport of Careem. Results can be coincided with (Nuva et al., 2009).

The result of the variable Nature of Profession shows that statistically significant at the confidence level of 5% at the value of 0.058.

According to the results average spending on Careem per month is statistically significant at the confidence level of 10% at the value of 0.088 with the positive sign of the coefficient. It implies that as the spending by respondents increases more of the respondents will be willing to pay. Logistic regression results of the variable Careem charges reasonability as compared to other transport (taxi, rickshaw) shows non-significant at the value of 0.750 and have the positive coefficient sign.

The variable of Careem in better condition as compared to other transport (taxi, rickshaw) is significant at 5% at the value of 0.041. As the condition of the vehicles of Careem transports more of the respondents will be willing to pay.

Table 4

Model of goodness result

R Squared	0.99
Adjusted R Squared	0.347
Negelkerke r^2	0.47
Log-likelihood ratio	128.709
Hosmer and Limeshow test	(*df*=8) significance test result 16.042 (*p*-value= 0.042)
Model Prediction, WTP for Careem	80%
Chi-Square	16.042
Sample Size	140

Table 4 shows the model goodness of results and explains the factors that determine the willingness to pay. The test of Hosmer and Limeshow shows the results as non-significant and

indicates the model is a good fit. While adjusted r2 values are 0.347 and 0.470 respectively which indicate that 34 percent and 47 percent of the variations are explained by the model. The model prediction for WTP for Careem is 80 %.

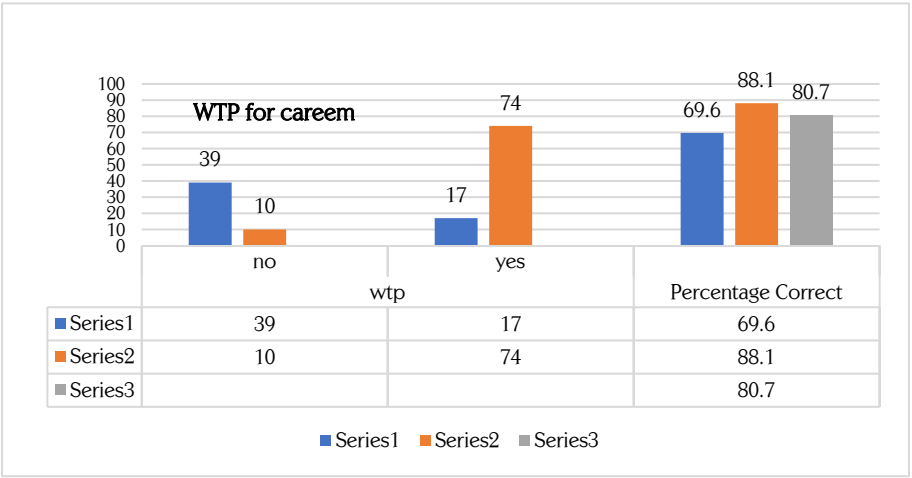
Table 5

Overall Percentage for Dependent Variable WTP for APP Careem

Observed 140		Predicted WTP		Percentage Correct
WTP	NO	39	17	69.6
	YES	10	74	88.1
Overall Percentage				80.7

Table 5 shows the overall percentage of the users of the Careem App 80.7 per cent of who are willing to pay for the service, whereas, 69.6 per cent of users are not willing to pay more for the Careem App service per kilometre. The respondents users who are willing to pay more for the Careem App are 88.1 per cent. Graphical representation results are depicted below.

Figure 1



Conclusions and Suggestions

The study used contingent valuation methods to estimate the willingness to pay of the users for the App-based transportation of Careem for additional charges. A binary logistic regression model was used in the study. Generally, users were willing to pay for more charges on the basis per kilometre than they are currently paying. To provide more facilities management need to get more charges also to maintain the facilities. The result of the study indicates that 44% of the users were willing to pay 1 to 5 Rs per kilometre additional charges for the App-based transportation of Careem. The result of the study also indicates that gender, income, and education were the significant factors that influence the additional charges that they are willing to pay for the Careem. Reasonable charges were non-significant and average Rs spent on Careem per month were the significant variables that influenced the willingness to pay for the App-based transportation of Careem.

Results indicate the relationship of the variables which could be beneficial for giving better policy suggestions for improving App-based transportation and enhancing the willingness to pay of users. By the results of the study, some of the suggestions are recommended.

The study shows that users were willing to pay more per kilometre than they actually paying at the present time and most users were willing to pay 1 to 5 Rs per kilometre more which would generate a sufficient amount of money to be used for the improvement of App-based transport.

In those cities where the infrastructure of transport cannot be upgraded like in villages, government authorities could seek temporary partnerships with App-based ride-sharing enterprises to promote this new mode of transportation.

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