User's Perception of Application-Based-Ride-Sharing-Services in Dhaka City: A Study on Uber

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ABSTRACT

22nd November 2016, a historic date on the horizon of the transportation system of Bangladesh. 'Uber' Bangladesh has launched its operation in Dhaka, the capital city. Uber is a growing - application-based ride-sharing service and popular transportation media, known worldwide as of late. Dhaka, Chattogram, and Sylhet, people living in these three big cities have been availing of this innovative ride-sharing service. This study attempts to interpret the context of consumer behavior of this service i.e., why people do prefer Uber services over other existing public transport and post evaluation of that service offered by Uber. A short-range questionnaire survey has been undertaken. Secondary sources of data were also collected for literature. For this study, 100 respondents were surveyed following the purposive sampling method in different areas of Dhaka city. The equal Male-Female ratio of data size has been maintained. Data were analyzed using the SPSS-16 version maintaining the standard of research ethics and validity. The perception of users has been found positive towards this ride-sharing service. 77% of respondents said they are happy availing service from Uber and 23% of them are unhappy with the Uber service. Data concludes that the sense of being unhappy derived from some service problems like high costing for short distances, accidents, and lack of commitment of Uber drivers. To attain the goal of 'Sustainable Cities and Communities' of SDG-11 further includes the target of 'providing access to the affordable and sustainable transport system for all by 2030', this sort of innovation in the transportation sector is sure of blessing for this 'Mega City' like Dhaka as well as for Bangladesh. It will help step forward on the ladder of Development for the country.

Keywords: Uber, Transportation, Purchase decision, Satisfaction, User's perception, and Dissatisfaction.

INTRODUCTION:

"Uber is one of the most famous Transportation networks" (Azevedo, 2015), which has become a part of the daily transportation system. It is an Application-Based-Ride-Sharing-Service. For many people in the city area including students and workers, this Application-Based-Ride-Sharing-Service helps those providing exceptionally smooth riding services. This has led to a question among the researchers about why people

choose this Application-Based-Ride-Sharing-Service and how they feel after having a ride from Uber. A famous Scholar, Azevedo, (2015) studied 'Social Economic & Legal Consequences of UBER Similar Transportation Network Companies (TNC) provided arguments in favor of UBER and other TNCs "deal mainly with attractive prices & additional transportation choices for consumers which could, in turn, lead to reductions in car ownership and the creation of new jobs". This

new system benefited both drivers and consumers in many ways such as reduction of search costs for waiting on roads for taxis. Probably the ultimate users of Uber are workers who want to reach their desired places. It seems that nowadays people are more conscious than before they use the internet and application-based services. They are concerned about their time, comfort, and safety issue. A paper was published, titled "The Influence of Customer Satisfaction on Ride-Sharing Services in Malaysia by Balachandran and Hamzah, (2017).

The purpose of this study was to identify the factors which are affecting service quality on customer satisfaction. The findings of the study were that tangibility, reliability, price, coupon redemption and comfort have a positive significant association with customer satisfaction. Among all comfort is the most influential factor in UBER customer satisfaction. Similarly, Yasar and Shashuki *et al.* (2018) in their paper on 'Passenger safety in Ride-sharing Services' found- "there are reports of harassment, assault, and robbing passengers on these rides. And no strict measures have been taken because the company does not have full control over the driver, vehicle, and ride. The poor feedback system has also added fuel to the fire." Their recommendation is- "As UBER are filling the gaps of better services across the world, there is a dire need of having security measures to make sure that rider safety is ensured from the stand of the journey till he/she reaches the destination."In Public Transportation, sometimes it can be seen that, due to traffic jams, and unskilled driving processes, people often miss their important tasks and meetings. They become unable to reach their destination on time. But in Uber, they are not facing these types of problems. This hassle-free transportation service of public transport paved the way to enlarge the area of using Uber. What is more convenient than ordering a ride from one's smartphone? With just a few taps on the application and one can choose the type of car, pick the destination, and pay for it all electronically, with receipts, too. LI, Hong and Zang *et al.* (2017) studied together 'An Empirical Analysis of on Demand Ride-Sharing and Traffic Congestion.

They basically analyze the impact of Uber as an Application-Based-Ride-Sharing-Service on urban traffic congestion in the United States. Their finding was that

the launch of Uber has significant contribution to the reduction of traffic congestion in California. Perhaps, Uber is going to be turning into a blessing, especially in the context of Bangladesh's transportation system as Bangladesh is the 8th populous country and Dhaka is one of the busiest megacities in the world now with about 20.5 million people. Here, people have to struggle hard in order to avail public transport for their various sorts of purposes. In Dhaka city alone, there are more than 20 types of public vehicles in operation. But the still hazardous situation in traffic system prevails within this city area. According to a Bangladeshi daily national-Dhaka Tribune (2018), it is reported that 'Dhaka loses about 3.2 m working hours in a day which is causing a huge amount of loss in national economy'. The people of Dhaka have been seeking for getting relief from this problem. In this regard, as part of compliance with the global trends, Uber was launched in Bangladesh in Dhaka city on 22nd September 2016 and started providing 24-hour service. Within November 2017 about 200000 people took Uber service and about 10000 active drivers are relentlessly providing service through Uber. Uber started its journey in 2009 as founded by Garrett Camp in California. As the number of internet users is increasing very highly, the scope of establishing Application-Based-Ride-Sharing-Service has been broadened.

Now, the overall number of internet users is 80.829 million and about 75% of the population of Dhaka city is using the internet (Btrc.gov.bd, 2018). This condition of Uber service inspires does let us explore the consumption pattern of the service in Dhaka city. We found several studies on UBER services but most of those are done in other country contexts like the USA, and Malaysia. The environment of Bangladesh's transportation system is massively different from that of those countries. That is why this study is designed the way to figure out the reasons behind choosing Uber ride services in Dhaka city and to measure users' perceptions regarding the service.

MATERIALS AND METHODS:

This study has been designed following a quantitative approach to research. To serve the objective of this study, necessary data has been collected from both primary and secondary sources of data. Primary and raw data has been gathered from the potential respondents

through conducting a questionnaire survey. On the other hand, essential and relevant secondary data has been retrieved from various sources. It includes books, academic journals, articles, and other published documents and relevant reports. Under the Non-probability sampling technique, the convenience sampling method has been followed by collecting data from two groups (Male and Female) maintaining an equal ratio i.e., 50 male and 50 female respondents in a random way. The research area of the study was the whole of Dhaka city. There are about 20 million people living in Dhaka City among them 75% use the internet according to governmental calculations (B.B.S-2018). As Uber requires its users to have internet, so this vast number of people was the population for this study. Besides, there is a Facebook group as well named "Uber users Dhaka" that has more than 2,00,000 members. They were the study population for this study. The sample size for this survey has been finalized at around 100 maintaining equal participants of male and female respondents and with the highest standards of research ethics. In this study, a structured questionnaire has been employed to gather empirical data. It was a mixed questionnaire with a combination of both open and close-ended questions though the space for open-ended was too narrow. The questionnaire contained mostly close-ended and some open-ended questions. The probable number of questions was approximately 20 with some demographic queries. Most Data was collected physically, and a few were collected virtually using Google form. Collected data have been analyzed by applying some statistical tools such as descriptive statistics and other techniques to explore the output of the study thoroughly. SPSS VERSION 16 got used to processing & analyzing collected data. Different charts, graphs, and statistical calculations of data have been generated using SPSS 16 programs.

Relevant Theories

Behavior Theory

As people consume Uber services, Consumer behavior theories may work out getting the perception of users relatively better. "Consumer Behavior is the study of individuals, groups, or organizations and all the activities associated with the purchase, use, and disposal of goods and services, including the consumer's emotional, mental, and behavioral responses that precede or follow these activities" (Kardes, 2011). They need to identify the influencing forces that affect consumer decisions (Lynn & Angeline, 2011). The study of consumer behavior also investigates the influences, on the consumer, from groups such as family, friends, sports, reference groups, and society in general (Elizabeth & Lynn, 2014). Using this theory, the Objective of this study i.e., why people do choose App-based ride-sharing services in Dhaka City especially Uber Services can be found. Persons who consume this service can be interpreted pretty well in accordance with this theory.

Black Box Model of Consumer Behavior
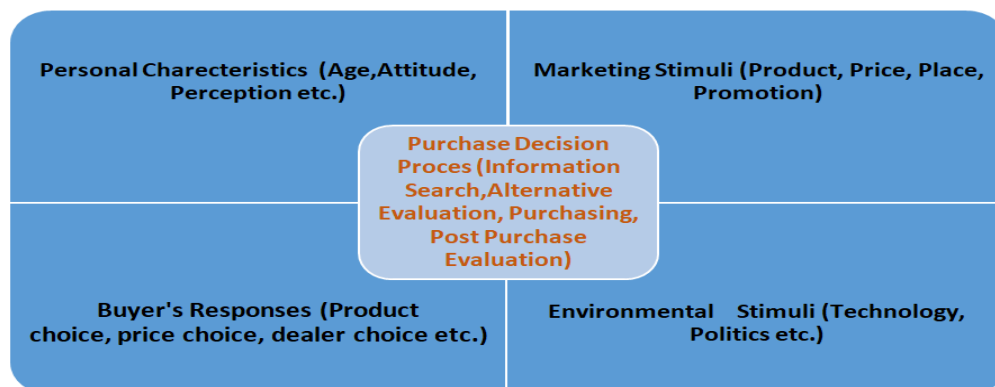
Fig. 1: Black box Model of Consumer Behavior Theory by Sundhasen & Richard (2000).

The black box model by Sundhasen & Richard, (2000) is closely related to the black box theory of behaviorism, where "the focus extends beyond processes occurring inside the consumer, and also includes the relation between the stimuli and the consumer's response. The decision model assumes that purchase decisions do not occur in a vacuum. Rather, they occur in real-time and are affected by other stimuli, including

external environmental stimuli and the consumer's momentary situation" (Sundhasen & Richard, 2000). He also added that "Marketing stimuli include actions planned and carried out by companies, whereas environmental stimuli include actions or events occurring in the wider operating environment and include social factors, economic, political, and cultural dimensions." These can be examined in terms of Uber ride services in Dhaka city.

Post Purchase Evaluation

In the eye of Foxall, "after experiencing the product or service, the consumer enters the final stage, namely post-purchase evaluation. The consumer's purchase & post-purchase activities have the potential to provide important feedback to marketers. The post-purchase stage is where the consumer examines and com-pares product features, such as price, functionality, and quality with their expectations" (Foxall, 2005). So, to know people's perception about the service they receive from Uber, Foxall's, (2005) assumption may work out well. Perception is measured through knowing the fact of cost, safety, security, timeliness, availability as well as serving the purpose in the eve of urgency by Uber. These factors simultaneously can make feelings of satisfaction for someone and feeling

of dissatisfaction for others. "After acquisition, consumption or disposition, consumers may feel some uncertainty in regard to the decision made, generating in some cases regret" (Anderson, 1994). Post-decision dissonance (also known as cognitive dissonance) is the term used "to describe feelings of anxiety that occur in the post-purchase stage; and refers to the consumer's uneasy feelings or concerns as to whether or not the correct decision was made at purchase" (Dey et al., 2021; Maclnnis, 2014). Do people have any sort of dissatisfaction with services from Uber, would be identified?

Analytical Framework

According to the objectives of this study, the perception of Uber user's needs to be identified and analyzed. Perception about purchasing behavior of Uber users and post-purchase evaluation that contains satisfaction and dissatisfaction of users. That is why these 3 three dependent variables have been identified here to form the analytical framework. Under every dependent variable, there are some independent variables that affect the result of dependent variables. Measurement got clearer using indicators for every independent variable so that data can be gathered easily from the respondent in the form of a questionnaire.

People's purchasing factors for Transport services

Table 1: Dependent- Independent variables and Indicators Factors of User's Satisfaction with Transportation.

Dependent variable -01	Independent variables	Indicators			
People's purchase of transport services	1.Personal characteristics	age	income	expenditure	preference
		Gender	Occupation	Lifestyle	Attitude
	2.Marketing stimuli	Advertising	Price		Products
		Offer	Promoting		Variation
	3. Environmental force	Culture of the service area		Ease of technology uses	
		Reference groups (family, friends)		Purpose and Necessity	
	4. Service brand value	Reputation		Comparative benefits	
		Customer-friendly		Service delivery	

Table 2: Dependent- Independent variables and Indicators Factors of User's Dissatisfaction with Transportation Services.

Dependent variable -02	Independent variables	Indicators		
User's satisfaction with Transportation Services	Better Service Quality	Low Cost	Availability	Comfort
		Safety	Complaint Mechanism	Good feeling

Table 3: Dependent- Independent variables and Indicators.

Dependent variable-03	Independent variables	Indicators	
User's Dissatisfaction with Transportation Services	Poor Service Quality	High Cost	Discomfort
		Insecurity	Unavailability
		Accident	Bitter Experience

RESULTS AND DISCUSSION:

In this chapter result of the data analysis has been presented using charts and graphs and also photos where it was suitable to get a clearer understanding of Uber user's purchasing behavior and perception of Uber users including the level of satisfaction and dissatisfaction of users in terms of Uber ride service in Dhaka City.

Users' Purchase decision of Uber Ride Services

As mentioned above in the Analytical framework that User's purchase decision depends on four independent variables those are Personal characteristics, marketing stimuli, Environmental stimuli, and Service branding. Under these independent variables, there are some indicators to evaluate whether this is working or not. Data got analyzed here using descriptive and frequency analysis.

Personal Characteristics

Gender

As per the consumer behavior theory and purchase decision model, personal characteristics like age, gender, preference, lifestyle, occupation, personality, income, and residential area are the factors that can require somebody to buy or consume some sort of services available there. So, let us see what is found in the gathered data from Uber users to explain their behavior.
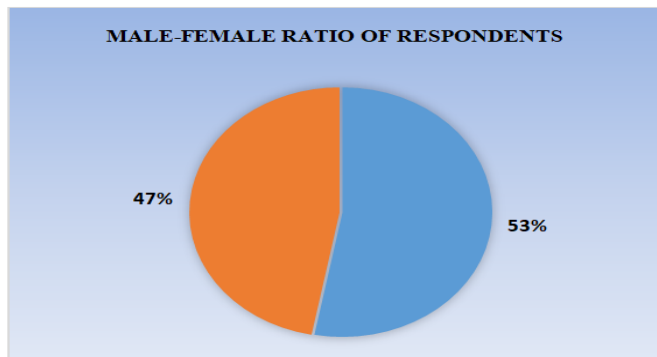

Fig. 2: Male-Female ratio of the respondents.

Here the total is 100 respondents among them 53% Male users and 47% Female users of Uber which represents a scenario of the male-female user ratio in Dhaka city. So, it says that perhaps females take Uber rides less than male users in Dhaka. There can be many factors behind this scenario. Maybe females are more concerned or afraid of using something new or

they might not be familiar with the 'Moto' journey compared to a man. Also, it may happen due to existing gender stereotypes as it is. Whatever it is, 'gender' is a determinant issue for choos in Application-Based-Ride-Sharing-Services in Bangladesh.

Age

The age of respondents is a key factor in this study to know whether age is also responsible for choosing Uber services, a technology-based ride-sharing service. Older people might not feel comfortable using or opening an account in the Uber app[i]. On the contrary, a vast number of young people living in Dhaka city are supposed to use these techno-based services in their daily necessities. Because, now these days, young people in Cities are getting more proficient in the use of modern technologies.
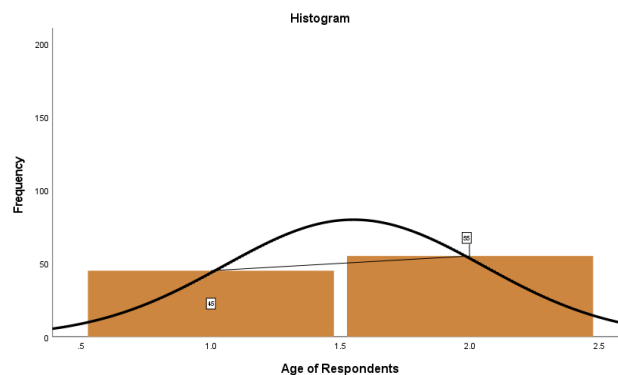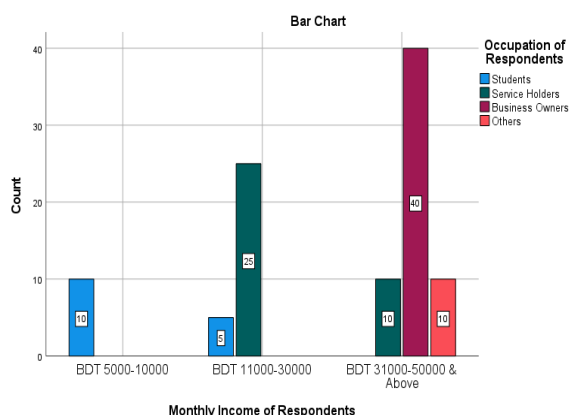

Fig. 3: Age of the respondents.

Interestingly respondents aged between 18 to 30 years are comparatively less than the group of respondents aged between 31 to 50 & above. The gap is clearly shown as per the interpretation line in the graph above. It is also shown that value 1.0 (Age range 18-30) is 45% and value 2.0 (Age range 31-50 & above) is 55%. It is relevant here that using Uber is more costly compared to public transport. That is why people with greater income are ahead in using Uber services. As age and income go in a parallel direction, more age means more earnings and less means less. Though youth are more likely to use technology-based services Like Uber but earning a lot at an early age is a rare phenomenon in a less developed country like Bangladesh. Children aged less than 18 got excluded in this study supposing they get no or minimal chance to use Uber rides. Parents might not let them go by Uber rides like Uber Moto or other types. And senior citi-

zens aged above 60 might not like it or use the personal car in Dhaka.

Occupation and Income/ Expenditure
Occupation and Income variables are supposed to have a significant impact on behavior patterns of consuming any products or services. And it is no exception in terms of Uber ride services. Occupation may create urgency of transportation and influence the respondent's purpose of use. Service holders would use Uber to go to his/her office-place, workers to factories or markets, students to school, college or Universities, and things like that. A cross-table below compares the Uber user's level of income and their occupation.

Fig. 4: Monthly and occupation income of the respondents.

Here is the specialty of Uber that a person with low income/expenditure can also consume this service. Here we see 10% of students who use Uber rides earn or expend between BDT 5000-10000 per month. 5% of Student respondents belong to the income range of 11000-30,000 BDT. We can assume the story behind it. 5% of student respondents who belong to a little bit higher range of income might be part-time teachers or freelancers or involved with small business initiatives. Workers and service holders mainly belong to the income range of BDT 11,000-30,000 which is 25% of the respondents. It also depicts some stories that are homogenous in character, they are Middle and lower

The middle class in this Mega City, and might be engaged in jobs whether it is formal or informal, not highly paid off. Among the respondents, 40% of business owners, 10% of Service holders, and 10% of people who earn from other sources who use Uber ride services belong to the comparatively higher range of

income (BDT 31000-50000 & above). This range of income for service holders is basically formal jobs whether public or private jobs. This is said as the National Pay Scale[ii] fixes the salary of 1st class government officers ranging BDT 22000-53060. Those who are highly paid in Dhaka city usually have their own Bike or Car.

Marketing Stimuli of Purchase decision
People choose Uber-ride because the market forces them in a way they cannot ignore. It is a universal truth that the market has the power to force customers to buy or consume some sort of service or product. In Dhaka, people are bored with the traditional way of transportation for huge traffic congestion and scarcity of public transport, so they get easily affected by the advertisement for Uber rides which is faster and easy to have a ride from anywhere in the city.

Fig. 5: Advertisement of Uber in Bangladesh.

Here we see the brand ambassador of Uber Mr. Shakib Al Hasan who is a legendary cricket star in Bangladesh. Using its popularity Uber is trying to attract people to purchase Uber services. And seemingly they are successful in achieving their motto as Uber has become popular with city dwellers and has reached millions of people in Dhaka city within only 2 years.

Environmental Stimuli and Service Brand
The culture of the person using Uber-ride as well as the culture of the city can influence the Purchasing choice of people. Uber has achieved its brand value within a short course of time. One's personal cultural force means he/she can be forced by the demand and soft influence of his/her surroundings to buy or consume a service or a product.

Information about Uber
The chart below shows the information sources of Uber, i.e., how people know about this. The bar chart mentioned above shows such an interesting thing that people often get influenced by just not only adver-

tisement that is a marketing force, rather they get influenced by the influence groups like Family members, but friends as was also mentioned in 'Black Box Model' of Sundhason and Richard, (2000) & this got proved here. Besides people get influenced by the culture of their Surroundings & social media that now has become their companion of people 24/7. Ultimately people get influenced by social media advertisements of Uber Bangladesh as well as Facebook posts of his/her friends describing their Uber ride experiences. The chart shows that the highest group of people 58% has known about Uber from the internet, some 17% from friends and families, and 14% from Uber advertisements offline. It opens a new horizon of potential for 'e-governance' and 'e-commerce' in Bangladesh.

Purposes of Uber Use

People's purposes could explain better why people use Uber ride services in Dhaka. A purpose of a service or product consumption depicts the significance of that service to the users too.
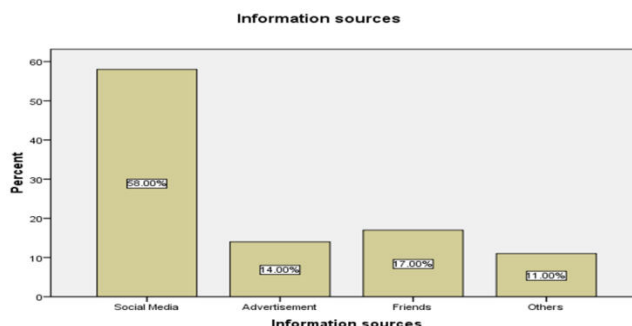

Fig. 6: Respondents source of information about Uber.

Table 4: Shows the Purpose of Uber Use by the Respondents.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	School/College Going	12	12.0	12.0	12.0
	Office & Business Purpose	60	60.0	60.0	72.0
	Personal & Family Needs	20	20.0	20.0	92.0
	Others	8	8.0	8.0	100.0
	Total	100	100.0	100.0	

It is shown in the **Table 4** that almost 60% of respondents use Uber services in Dhaka city for office and business purposes. So, it is proved that Uber is playing a significant role in pacing up the economic and social progress. 20% of respondents use Uber for personal and family needs, 12% for school/college-going, and 8% for other purposes like traveling or any other movement in urgency.

User's Perception in Terms of Uber Ride Services in Dhaka

Findings show that 77% of people are happy and satisfied enjoying Uber ride services in Dhaka city in terms of cost, availability, comfort, and quality services. 23% expresses unhappiness availing the service that comes out of accidents, complains of much high pricing for short distances, smoking in car or bike, cancellation of the trip by Uber drivers whimsically, the problem with paying fair with cash or cashless means, and such others. Actually, cars and bike owners never shared with strangers or passengers before this sort of innovative ride-sharing-services. This is the prime reason for people expressing a high rate of happiness availing rides using private bikes and cars in daily life that goes

even beyond imagination for some middle- or lower-class people once, except taxicab. Below shows the graphical presentation of Uber users' perceptions.
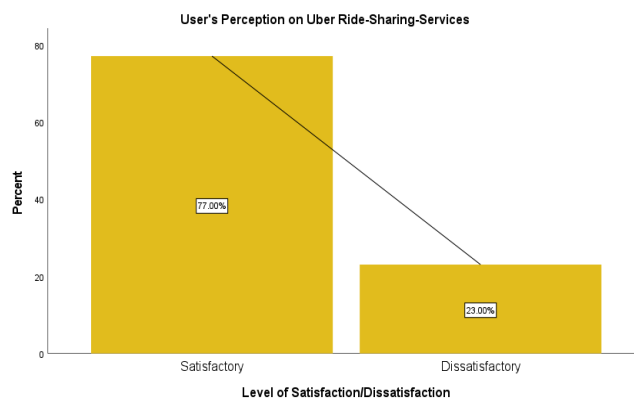

Fig. 7: Graphical presentation of Uber users' perceptions.

A Case of Unhappiness: Rasif Haque, a Bangladeshi Facebook content maker, uploaded a video titled "Uber issue with bKash payment! It is getting worse day by day" on December 21, 2020. The video was about 2.39 minutes. He disgustingly said that two Uber trips were canceled after 15 minutes wait at the pick-up spot by Uber drivers when they knew that the payment would be through bKash, not in cash. Even there is no mechanism to report these issues to Uber

authority. He also complained that these drivers completed almost seven thousand trips in this city and still they are behaving this way. He lastly urged Uber that this ought to be strictly monitored to make their business sustain overall.

CONCLUSION:

What deep realization one can get from the study is that Uber has a particularly good public image for its better service quality i.e., availability, safety, comfort, fastness, user-friendliness, and remedial measurement in case of objection. But the Uber service is not that satisfactory to some points relating to the poor service quality. Poor service quality happened to delay in response after a request call, high costing, unavailability, discomfort, insecurity as well slow response in remedial measurement. Uber Authority must abide by the "Ride Sharing Services Principles, 2017" and all other existing acts and rules to make their business sustainable. The first purpose of this study was to interpret people's purchasing behavior toward Uber services in Dhaka city. What we got now is that a person with a minimum Taka of 5,000-10000 thousand in a month could enjoy Uber rides whether he/she is a student or a worker or anybody else. Age and Income are the most significant factors proved in this study that requires somebody to purchase an Uber ride. Though youth are more likely to use technology-based services like Uber, the fact is people aging 31-50 & above is greater in number using Uber rides. This happened because youth are less able to afford the Uber cost than grown businesspeople or service holders. Things got clearer when it is seen that 60% of People use Uber services for office or business purposes in their daily life. No, doubt Uber is going to be perpetual in Bangladesh as almost 80% of people are happily availing of this service. It would not be an exaggeration if somebody says that Uber has shaken the traditional transportation system of Dhaka city and it would help to build Dhaka into a modern, digital, and technology-friendly city in near future. It will help more people to get this service and for some, it would generate smart income shares. Thus, it would fulfill the milestone of the 11th goal of Sustainable Development Goals (SDGs) i.e., 'Building Sustainable Cities & Communities' that further includes the target of 'pro-viding access to the affordable and sustainable trans-port system for all by 2030'. This sort of innovation in the transportation sector is sure of blessings for this 'Mega City' like Dhaka as well as for Bangladesh. It will help step forward on the ladder of development for the country.

CONFLICTS OF INTEREST:

The author declares that there are no conflicts of interest associated with this publication so far.

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ENDNOTES

[i] The Author used the word 'App' to mean software application

[ii]8th National Pay Scale 2015