

Uber Services in Dhaka City: Empowerment or Entrapment?

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Abstract: Proliferations of internet and affordable smart phones have created avenues for internet based innovative ridesharing services in Bangladesh. Particular conditions of existing public transportation, increasing demand for comfortable transport services, and a consumer-friendly market have been the underlying reasons for different ridesharing services offering companies to operate in Bangladesh, particularly in the capital. Uber joined in the market and became an inseparable part mostly due to its brand strength driven acceptance. However, this acceptance is found not to implicate consistent customer satisfaction and in some cases fair business practices pursued by Uber in Bangladesh. This qualitative research concludes that mostly a group of car owners¹ (instead of all the Uber drivers) and mostly the affluent passengers (instead of all the passengers) are the major beneficiaries of Uber in Dhaka. It also shows that inception of Uber in Dhaka city has incurred some social costs for some drivers and some marginalized people particularly the child labor involved in automobile workshops. However, the particular modality of Uber in the city has also created commercial opportunities for some institutions such as banks and mobile network operators. Nonetheless, majority of the value chain actors in the demand side of Uber value chain in Bangladesh conceive its services being more of exploitative than satisfying. The findings implicate that some of the underlying algorithms and strategies Uber uses are not context sensitive, and adaptive, rather inflicting.

Keywords: Uber, Bangladesh, customer experience, empowerment, entrapment

Background

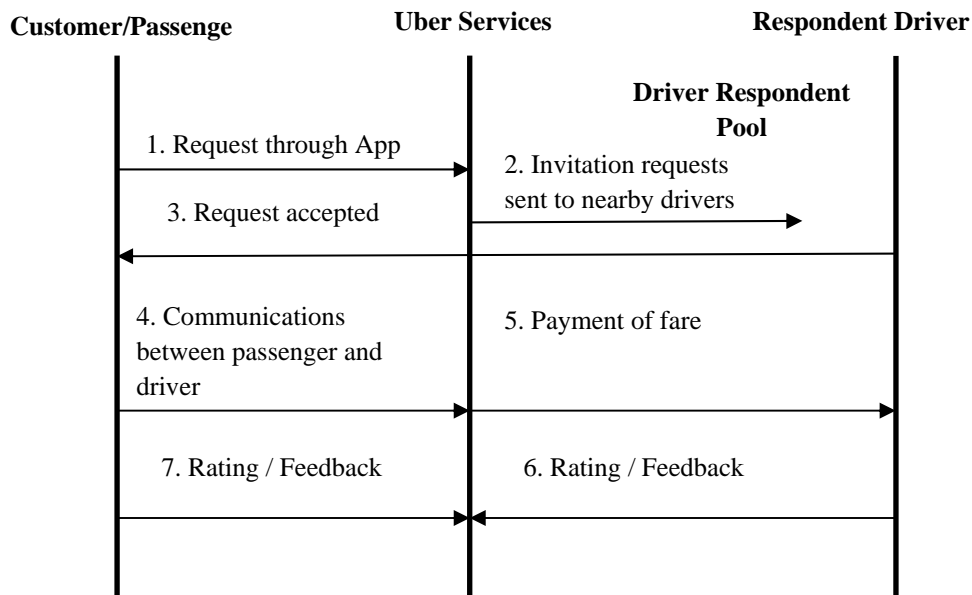
The ridesharing services Uber offers are patented with the United States (US) as a “system and method for operating a service to arrange transport amongst parties through use of mobile devices” (Camp, Salazar and Kalanick, 2011). Some researchers conceive that this service is rooted in the cooperative practices which are fundamental to the formation of society (Schneider, 2017). This internet-based transportation network company is headquartered in San Francisco in the US and is operated in over 400 cities in the world (Uber, 2018). It is involved in ridesharing, taxi cab, food delivery, motorbike

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¹ This research focuses only on Uber cars excluding other vehicle option which is motorbike.

sharing and bicycle sharing services with varying levels of innovations which depends on the city in which Uber services are being operated (Schneider, 2017). In Bangladesh, Uber started its services first in the late 2016 but only in Dhaka city and amidst a ban imposed by the Government of Bangladesh (GoB). After successful lobbying, Uber along with other internet based ridesharing companies received government permission and Uber started services in the port city Chittagong in early 2018. The following diagram schematically shows the principles which Uber follows in offering its ridesharing services.

Figure 1: Uber ridesharing principles in a schematic diagram



Source: adapted from Camp *et. al.* (2011)

The Figure 1 above shows that Uber services are initiated by customers/passengers through their Uber app-based² requests which are processed by Uber services system and then broadcasted to nearby drivers. The driver, upon accepting the request, keeps communications with requesting passenger for a seamless pickup experience. After completion of the trip, driver receives fare through cash/card payment and then both driver and passenger can provide feedback and/or rate the trip experience. These basic services principles are followed by Uber around the world (Camp *et al.*, 2011).

In Bangladesh, Uber offers mostly motorbike³ and car-based services although a few microbuses are also included in the vehicle pool. The car-based services are categorized

² App is the short form for software application.

³ Uber names this service as 'Uber Moto'.

into UberX⁴ and Uber Premium⁵ where the later services are offered through comparatively better-quality vehicles. In addition to these services which target single or one-go travels, Uber also offers two other services in Bangladesh to tap other commercial opportunities. In early 2018, it started offering UberHIRE⁶ services for both UberX and Uber Premium options (Uber, 2018). In the middle of 2018, Uber introduced InterCity services targeting mostly those who need business trips to factories in the outskirts of Dhaka and those who need occasional day out trips outside Dhaka city (Uber, 2018). These new services might be considered as proofs that Uber has sensed commercial prospects in Bangladesh. While these business expansions implicate positive experiences faced and/or expected by Uber in Bangladesh, there exists hardly any research presenting the scenarios how the key service participants – passengers and drivers – have been sensing and experiencing Uber services in the country. Although several researches exist which discuss issues around customer experience of Uber services but most of those represent realities of the developed countries except a few which represent those of China and India (Berger, Chen and Frey, 2018, Bond, 2014, Chen and Sheldon, 2016, Rogers, 2015, Sharma and Das, 2017, Sundararajan, 2014, and Wirtz and Tang, 2016).

Research Objective

A dearth of existing research focusing customers'/passengers' experience of Uber services in Bangladesh, as argued in the above section, is the rational underpinning of this research. Thus, this research is an initiative to address the particular gap in related literature. I aim to address the following objectives through this research in order to minimize the stated gap.

- a) Understanding the configuration of Uber value chain in Bangladesh.
- b) Analyzing how the key actors of Uber value chain in Bangladesh experience the services.

Methodology

I used qualitative research approach to conduct this research as the main research query is to understand how the services offered by Uber in Dhaka city are realized by respective actors in the Uber value chain. I considered only the services provided by Uber through car. The actors included Uber drivers, Uber partners, passengers, automobile workshop owner and its employees, banks, and mobile network operators. I used in-depth interview method predominantly to collect data. In addition to this, I drew on 1257 forum threads

⁴ UberX is the economic option for riding which offers basic services and facilities, emphasizing only functional benefits.

⁵ Uber Premium is the superior option for riding which offers exclusive and comfortable services and facilities, emphasizing luxury with premium functional benefits.

⁶ UberHIRE is a time-based ridesharing service instead of the usual destination based one, targeting people who need multiple trips in a day without the trouble of requesting Uber multiple times.

from two local Uber users' discussion forums on Facebook a popular online social networking platform. I used existing packages in Python programming language to extract data from those two discussion forums. A total of 108 people were interviewed in which, five were Uber employees, 40 were Uber drivers, 40 were Uber passengers, ten were Uber partners (vehicle owners), two were automobile workshop owners, five were automobile workshop employees, three were officials at three private commercial banks⁷, and three were officials at three mobile network operators⁸ which has access to Uber drivers and passengers with their call and data services. I did not consider Uber motorbike drivers and motorbike owners who joined in Uber services as my respondents for this research, and hence the resulting findings would not apply to Uber motorbike services.

Analysis includes a thematic analysis instead of using SERVQUAL and/or Gap Model as these frameworks are not adequate to analyze experience of the value chain actors other than the customers/passengers/service takers⁹ and this article includes experience of value chain actors beyond the Uber users such as automobile workshop owners, automobile workshop employees, employees at commercial banks and those at three mobile network operators.

Uber Value Chain

While value can be perceived as what buyers are ready to pay for, value chain can be considered as a tool used to identify competitive advantages and finding out the means to enhance those advantages (Porter, 1985). Uber aims to provide value mostly towards the passengers or uber service takers. This ridesharing services provider can be considered as an instance of a product-service system (Ulrich and Eppinger, 2016). Therefore, the value chain of Uber can be thought of being influenced by both the tangibility and intangibility aspects. This can also be theoretically underpinned because the concept of value chain which Porter (1985) proposed was in the context of the traditional manufacturing while the intangible service components in a product-service system demand a different perspective other than the one led by tangible manufacturing context. While automobile i.e., vehicle can be categorized as tangible dominant (Zeithmal, Bitner and Gremler, 2008) but in the case of internet facilitated Uber ridesharing services algorithm based labour management, asymmetry of information, reservation system, insurance, maintenance, customer/passenger experience and interactions with Uber driver, and online billing management implicate the strategic dominance of intangibles in case of the Uber product-service system (Allen-Robertson, 2017; Lee, Kusbit, Metsky and Dabbish, 2015; Rosenblat and Stark, 2016; and Ulrich and Eppinger, 2016). The dominance can be

⁷ The three banks are The City Bank, National Bank Limited, and Uttara Bank Limited.

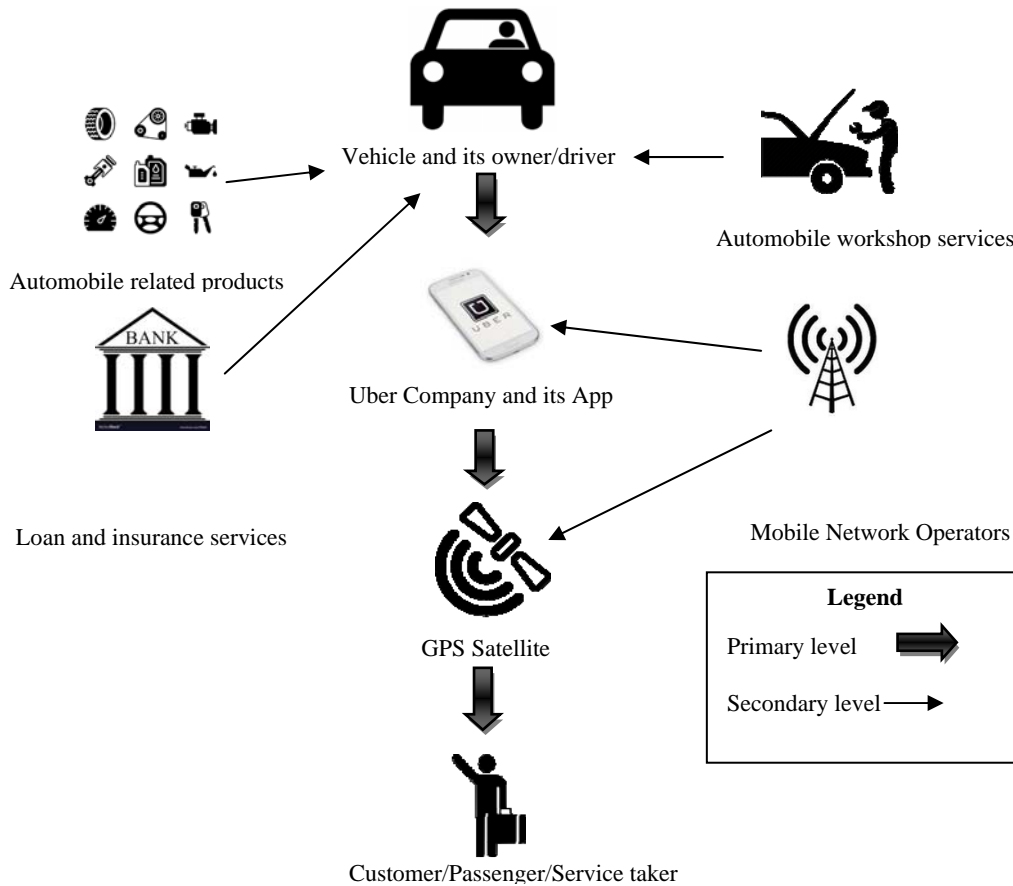
⁸ The mobile operators are Grameen Phone, Banglalink, and Airtel Bangladesh.

⁹ I use the terms customers/passengers/service takers synonymously throughout this article.

perceived as strategic as the underlying enforcement in the value delivery process caused by the algorithm is not apparently visible or comprehensible to the ordinary Uber service taker.

The value chain of Uber in Bangladesh comprises primary and secondary levels. The primary level comprises vehicle and its owner/driver, Uber as a company and the application software¹⁰ (App) it uses, Global Positioning System (GPS) satellite, and customer/passenger/service taker. The secondary level comprises automobile workshop, manufacturers and marketers of automobile related products, financial institutions, and mobile network operators. I identified the configuration of these value chain actors from the empirical data, which is presented in the following Figure 2.

Figure 2: Uber Value Chain in Bangladesh



Source: Author’s construct

¹⁰ I use the term ‘App’ to indicate software application.

These two levels are conceived based on the visibility and/or direct interactions of the respective value chain actors while Uber customer/passenger/service taker experiences the services provided by Uber. Vehicle and its owner/driver appear as a unitary element in Uber services to the service takers. However, quality of the vehicle; performance and attitude of the driver; and the underlying motivation of the driver shaped by the relationships between driver and car owner considerably influence the ridesharing experience of the customer/ passenger/ service taker. There exist complex and sophisticated relationships among these expanded service marketing-mix elements which are considerably influenced by the algorithmic labour management of the San Francisco based company, Uber. This complexity is reinforced further by the persisting information asymmetry among the three key actors – Uber, the drivers, and the customers/passengers/ service takers. GPS satellite service is the major technological link that binds Uber in the USA with Uber drivers and service takers in Bangladesh. Automobile workshops in Dhaka are slowly declining in number though they have been earning more after the inception of Uber services in the city due to increased demand for vehicle maintenance and repairing services. Similar benefits are realized by the manufacturers and marketers of automobile related products including auto-parts, fuel, and insurance. Financial institutions such as commercial banks play a role as they offer car loan facilities and their interest in promoting such loans increased with the inception of Uber in Bangladesh. This loan facility enables individuals purchase a vehicle and enjoy Uber services as partners without paying off the full payment by availing instalment option. While mobile network operators are integral parts of Uber services, in Bangladesh different mobile network operators enjoy varying privileges due to their respective capacities in infrastructure and market coverage.

Analyses of Findings

Analyses of the empirical data and findings from the discussion forums are synthesized and presented under specific themes below drawing on each of the value chain actors as per the Figure 2 above.

Uber appears more attractive for vehicle owners than for the drivers

Experiences of the vehicle owners (who are considered as partners by Uber) and experiences of Uber drivers regarding their involvements in Uber services show a mixed picture. Uber was unanimously accepted as a lucrative means of livelihood by both these parties at its inception in Dhaka city. However, after over a period of one-year, Uber is not conceived in the same way by both these parties. Most of them believe that Uber has become a feasible means of livelihood mostly for those Uber drivers who also own the respective vehicles.

Uber partners who own more than one vehicle that are involved in Uber services are happy with their income coming from this investment. However, Uber partners who own single vehicle now find investment in Uber as a less attractive option because of the decreasing figure of income after paying salary to respective Uber driver. As the reasons behind their changed attitude towards Uber they also pinpoint the decreasing resale value of the vehicles. Nevertheless, most of the Uber partners wish to continue their investment in Uber so long as their income remains reasonable, transport infrastructure is maintained properly, and road traffic situation remains manageable. In order to engage more cars in service, Uber now offers onetime financial incentives to attract car owners to become Uber partners. A few Uber partners who occasionally act as Uber drivers and who do not need to depend on Uber for regular income find this ridesharing service as a convenient source of petty cash.

All the Uber drivers acknowledge that their involvements in Uber have brought higher social values for them as people consider Uber as a prestigious international brand. They claim that it has uplifted their social status and has enhanced self-esteem. Particularly the Uber drivers who are in their early 30s acknowledge that Uber has become a change agent by letting the youth earn an amount of money which they could not earn from any other job through fair means. However, all of them argue that driving for Uber as a profession is a sustainable option only when the respective driver also owns the vehicle so that the resulting income is not shared. They claim that as they need to share their income with vehicle owners, ensuing a decent income portion for them needs long hour continuous driving. This puts them into considerable health risk as most of them cannot manage adequate time for taking rest and even food and drink which are vital for safe driving. Therefore, it appears that Uber in Bangladesh is a convenient livelihood option but only for those Uber partners who own more than one vehicle that are involved in Uber services and those Uber drivers who also own respective vehicles they drive under Uber services.

A more context sensitive approach is essential

While the overall underlying algorithm of Uber is found comparatively better than those of other local ridesharing services (such as *Pathao*¹¹, *Dako*, *SAM*¹², *Muv*, *Shohoz*, *Ezzyr*, *Bahon*, *Obhai* and *Obon*), views of majority of the passengers, Uber drivers¹³, and

¹¹ Although *Pathao* started business as a local company but it has now received investment from a Indonesian firm.

¹² *SAM* is the first ridesharing services introduced in Dhaka city which offers ridesharing services by motorbikes.

¹³ Among the 40 Uber drivers I interviewed, 15 of them use multiple ridesharing operators' services simultaneously, although it is prohibited as per the 'Ridesharing Services Principles, 2017' enacted by GoB.

partners implicate that Uber needs to adopt a more context sensitive algorithm to operate its services. The context sensitivity is associated mostly with the socio-cultural and topographic aspects of Dhaka.

The socio-cultural aspects that create difficulties for the Uber drivers, passengers and the Uber partners include lack of literacy particularly in English, lack of inclination of the low-income working adults towards using smart-phones, lack of technological skills required to operate smart phone App effectively, and inconsistent road and transport management. The majority of the dissatisfaction experienced by the Uber drivers, passengers and the Uber partners can be associated with the low English literacy¹⁴ because they struggle to make sense of the implied meanings of some of the options/instructions in the Uber app which is in English. Language barriers thus appear as a considerable hindrance to the effectiveness of Uber service provisions through the App. However, in most of the cases they could adapt to the App in about a couple of months time, though the language barriers are never fully resolved for them. In addition to these English language literacy as well as literacy in general, persisting information literacy¹⁵ among the Uber drivers, passengers and the Uber partners can also be argued to have caused conflicts between local level comprehension and Uber algorithm.

All the 40 Uber drivers are low-income working adults and they usually were less inclined to spend money and time for smart-phones before starting to work for Uber. This lack of interest is the reason why they are not comfortable and efficient in operating smart-phones effectively which eventually affects their performance as Uber drivers and ultimately results in customer (passenger) dissatisfaction. A lack of basic technological skills, such as operating digital devices, troubleshooting basic operational malfunctioning of the devices, and maintaining those devices, is another reason why some of the Uber drivers, passengers and the Uber partners struggle having a smooth experience while using Uber App. Majority of the Uber drivers suffer from this lack of skill and a particular algorithm of Uber App which by default keeps drivers opt-in for on-trip call request services. These drivers find this service as distracting, thereby dangerous, while arranging drop-off of existing passengers and simultaneously attending phone call from next passenger. They feel trapped because they cannot find any way to stop this service and if they do not receive the next request Uber would downgrade their performance

They use separate mobile phones to avail this multiple ridesharing operators' services in order to maximize their incomes through increased number of trips.

¹⁴ The definition of literacy varies around the world and Bangladesh is no exception. In Bangladesh a person is considered literate if s/he can write a letter. Although Government of Bangladesh uses this definition, it also admits the limitations of the definition (BBS 2008).

¹⁵ In order to be considered as information literate, a person must be able to recognise when information is needed and must have the ability to locate, evaluate, and use effectively the needed information (American Library Association 1998).

causing lesser trips and thereby less income for them. They also report that because of this pressing obligation many times they need to defer their food taking and/or to control their urge to make their toilet. However, drivers in their 20s are happy with this on-trip call request services. Nonetheless, only one driver is found who knows how to manually deactivate this service to get rid of this Uber imposed obligation that might even lead to a road accident. If drivers are distracted while driving and dropping off existing passenger they might lose control over their vehicles. A co-production approach towards App and algorithmic development could resolve these struggles as in that case there would be reflections of contextual realities.

There exists one issue that affects most¹⁶ of the Uber drivers with dissatisfaction and it takes place when they encounter passengers who pay through non-cash means such as Uber credit, promotional discounts and/or debit or credit cards. They find these non-cash means as de-motivating because at the end of the day's driving they get less hard cash in hand after the hard work throughout the day. This has got spiral impact over passenger satisfaction and experience with Uber because these drivers almost at all times downgrade passenger rating due to the non-cash payment. While some researchers have found that even in developing countries preferences are shifting from physical cash to electronic payments (Dzokoto *et al.*, 2016) but for Uber drivers in Bangladesh cash is highly preferred as the medium of payment mostly because of its comparatively higher degree of liquidity preferences, and because electronic/digital cash transaction¹⁷ is yet to become pervasive as a payment instrument in Dhaka city. Uber needs to address this conflict between convenience of payment method and drivers' acceptance of non-cash payment instrument.

All the Uber drivers and passengers argue that Uber service is not always consistent with the road and transport management situation in Dhaka city. They argue that sometimes the traffic suggested route to destination, provided by Uber App appears inconsistent with the realities because of the condition of the road or concurrent traffic situation. There exists unpredictability regarding any change in traffic situation as sometimes changes are made unofficially and/or temporarily which is not always reflected by the historical data based algorithmic approach from Uber. This issue can be correlated with the way Uber incorporates the topographic aspects of Dhaka city facing challenges when the Uber suggested route plan conflicts with living reality in the city. For instance, sometimes Uber suggested routes do not exist or are valid only for a few authorized people. As a result, it eventually creates dissatisfaction among passengers who are required to take alternate longer path and are charged higher than the initially committed fare. While

¹⁶ 37 out of 40 drivers have shared their dissatisfaction in this regard.

¹⁷ Although digital payment process has been adopted by a increasing number of business entities particularly in Dhaka city.

conflicts caused by mismatches between topographic configuration of the city and Uber defined route planning are infrequent¹⁸, but the conflicts caused by condition of the road and traffic situation have been common.

'GPS error' – a common reason for dissatisfaction

Employees at Uber dedicated for customer support in Bangladesh inform that passengers are overcharged mostly when Uber prescribed routes are not followed. These employees inform that Uber defined initial fare displayed on the device screen before a trip starts incorporates traffic delay and other related factors considered for price calculation. These calculations are reported to be based on historic data which can be criticized on fairness ground because a passenger could be charged higher fare based on an event which might never had take place before. According to these employees, passengers are charged based on the distance travelled and the travel time, and the same approach is applied for Uber drivers to calculate their income. However, 23 passengers report that they were overcharged as respective drivers did not follow Uber prescribed route, even though they did not take longer than estimated travel time and travelled lesser than the Uber App estimated drop-off time. They claimed that after contacting Uber over its App based reporting option they were informed that the overcharge occurred due to GPS error. While initially Uber would refund the overcharged amount in the form of Uber credit, 26 passengers claimed that unlike the initial service period currently Uber has not been addressing the overcharge issue sincerely. They claim that they have not been getting overcharged amounts refunded in the earlier manner since early 2018.

Uber drivers face a GPS services related technical problem caused by the telecommunication signal strength. Sometimes when they drive into a 2G covered location from 3G covered one, or get into a 3G covered location from 4G covered one their App interfaces become less responsive and their call request acceptances are sometimes ignored. As a result, respective drivers' profiles with Uber are downgraded resulting records of poor performance score which in turn get them fewer trips and lesser incentives. Seven Uber drivers report this problem and they inform that Uber contact point for drivers in Bangladesh cannot resolve this problem and instead of pursuing this with Uber in the USA they ask the drivers to do the same. Among the 40 drivers, 17 Uber drivers also report that due to poor GPS services, sometimes at particular locations they could my end their trip due to poor signal and had to travel far away from the destination to end the trip on the App which caused considerable dissatisfaction. A total of 21 Uber drivers also report that sometimes they receive lesser than the due amounts in their accounts and they need to contact Uber driver support to get the refund. However, Uber

¹⁸ Only 11 Uber drivers and 9 passengers mentioned this particular problem.

driver support in Bangladesh has been disregarding drivers' similar claims since early 2018 when the refund amount is less than BDT65. Therefore, GPS error can be identified as a recurring phenomenon causing dissatisfaction among Uber drivers and passengers.

Passengers encounter a mixed experience

While all the 40 passengers shared overall a positive view regarding the services Uber has introduced in Dhaka city, majority of them also shared few concerns which might work as feedbacks to flag up service improvement for Uber.

Although in 2014 Uber was alleged for being sexist and misogynistic in the USA (Rogers, 2015; Sartain, 2015), it is conceived as a change agent by the passengers in Bangladesh because it has been offering freedom of movement to both male and female passengers amidst persisting patriarchy (Cain *et al.*, 1979; Chowdhury, 2009; Kabeer, 1988; Kabeer *et al.*, 2011; Mitter and Ng, 2005). However, the patriarchal trend of male only driver persists. Passengers report that it is because of the availability of round the clock Uber services which enable them to travel even at late hours which they would not consider safe before. All the passengers report a sense of confidence in Uber brand for a comparatively safer travel within the city. They also report that Uber is a better option for them compared to the predominant gas driven three-wheeler, in terms of service standard though perhaps not always in terms of fare. 27 out of 40 passengers claim that Uber suggested route is comparatively less congested while others share a mixed experience in this regard.

Most of the concerns passengers share to implicate their feeling of entrapment can be linked to the algorithmic approach, and driver and/or partner management policy of Uber. These concerns are related with security, drivers' professionalism, quality of driving, drivers' attitude, and the on-trip call request services drivers receive which is discussed in section 5.2 above. Ten passengers report that they found a different driver than what Uber App displayed on mobile screen as their driver for the requested call. While some of the passengers argue that they usually do not check the drivers' faces to check for verification but all of them claim that Uber should take the driver verification procedure more seriously. Three of them shared that while their respective complaints were pursued by Uber customer-care, but they encountered similar phenomenon even after that official reporting. Although Uber occasionally verifies drivers' faces but they should address this matter in a more context sensitive manner to reflect the safety concerns shared by these passengers.

Among 40 passengers, 29 passengers shared their occasional poor experiences with Uber which are caused mostly by lack of drivers' professionalism, quality of driving, drivers' attitude, and quality of the vehicle. The following are the mostly cited complaints these passengers made.

- Some drivers drive dangerously at a cost of the wellbeing of the passengers. Passengers generally struggle with managing this sort of driving. Whenever they get engaged into managing reckless driving, respective drivers do not take that sportingly and rather review the passengers poorly. As a result of this reviewing technique of Uber, passengers do not feel the urge to manage reckless driving, leaving more passengers to face similar poor ride experience.
- Drivers do not receive any training from Uber regarding professionalism and Uber App operating. Many of these drivers do not know how to use a digital map properly which causes confusion and eventually causes passengers' dissatisfaction. Passengers argue that Uber must conduct an effective background check of the drivers other than just keeping official documents required by GoB and the related agencies.
- Some drivers allow smoking inside the car which affects passengers particularly the infants or non-smokers who take the next trip.
- Many drivers refuse destination whimsically which causes considerable dissatisfaction because when drivers refuse and cancel the trip, respective passengers have no way to report their dissatisfaction and/or resulting sufferings.
- A considerable number of drivers refuse passengers who pay by card. Respective passengers feel frustrated particularly when they find that paying by card is rather appreciated by Uber itself.
- In most of the UberX trips (the economic trip option other than the comparatively luxurious Uber Premium services) passengers suffer from non-availability of the air-conditioning system of the vehicle.
- Some drivers make and receive phone calls during driving which makes the ride risky. Sometimes drivers use different cars other than the ones committed by Uber App. While a few passengers report this issue but considering privacy and security it is serious concern.
- Many of the drivers refuse trip request and some of them sometimes intentionally cancel the requested trips after keeping passengers waiting for a considerably long time. 11 passengers report that after cancelling five trip requests due to considerably long waiting time and cancel requests from respective Uber drivers, Uber system left them unable to get any service for about an hour. Passengers waiting for hospital visit or emergency ride lose their confidence in Uber for this type of algorithmic approach. Passengers reporting complaints also share their concern that Uber does not offer any direct passenger support service through

phone calls, although there exists a driver support system that drivers can avail by paid phone calls but only during a limited period in a day.

- Surge pricing algorithm¹⁹ negatively affects passengers' experience with Uber and makes them feel trapped by algorithm because most of the times they cannot afford the respective higher fare which Uber charges due to scarce supply.

The above issues are partially addressed by the 'Ridesharing Services Principles, 2017' as well as the 'Taxicab Service Guideline - 2010', developed by the GoB (BRTA, 2018). However, while a few passengers are aware of this guideline, none of the drivers is aware of it.

Promising secondary level value-chain actors but with social costs

Automobile workshop, manufacturers and marketers of automobile related products, financial institutions, and mobile network operators comprise the secondary levels of the Uber value chain which in most cases benefit from the services Uber offer.

Automobile workshops are getting busier due to increasing workloads which can be associated with the introduction of ridesharing services patricianly Uber services in the city. Workshop owners share that vehicles need more frequent maintenance services when those are under Uber services because of the persisting work load. While this has resulted in increased income for them, but they also suffer from increased rent for workshop space. They argue that while owners of traditional workshops (that do not use computerized modern machineries and mostly depend on manual labour) suffer from scarcity of space in the city, the few modern workshops have been doing good business. While increased workloads bring prospect for the owners of traditional workshops, the same becomes a reason for social costs when children²⁰ employed at those workshops need to work harder and for longer hours for the same or similar amount of income. As manual labour driven traditional workshops are moving towards the outskirts of Dhaka due to urbanization, child labour exploitation might be expected to see a rise.

Several Uber drivers²¹ have been experiencing a difficult social crisis after joining Uber leaving their previous roles as private driver for a family. They joined in Uber with a hope of a better life, but the laborious continual driving has brought stressful days for them with a decreasing income for many Uber drivers. They now have lesser social time which they would get generously while they played roles as private driver for a family.

¹⁹ According to this algorithm, Uber increases its regular fair by a factor when Uber service call requests (demand) outbalance available nearby vehicles (supply) to offer rides. Uber does this to control demand and supply gap.

²⁰ While United Nations Convention on the Rights of the Child (UNCRC) proposes individual below 18 years old to be considered as a child, Government of Bangladesh considers individual as a child who is below 16 years old, following The Children Act of 1974 (Mohajan, 2014).

²¹ 9 Uber drivers shared about this social crisis.

Many of these drivers regret their decision to leave previous job for Uber to earn higher income which they never imagined would come at a considerable social and health costs. Uber was penalized for similar exaggerated prospective earnings which misled drivers in the USA (Reuters, 2017). Drivers who work for car hiring and traditional taxi services also suffer from a decreased income due to the introduction of Uber services, resulting social costs. Social costs of the introduction of Uber are also acknowledged by researchers who worked on measuring impacts of Uber (Rogers, 2015).

Manufacturers and marketers of automobile related products, financial institutions, and mobile network operators mostly enjoy the resulting commercial benefits caused by increased demand for their goods and services after the inception of Uber. Manufacturers and marketers of automobile related products experience a surge of demand for auto parts and fuel. Mobile network operators encounter high demand for their internet and voice call services which are integral part of Uber services. As a result, more people are using internet and related services in Dhaka city. A good number of commercial banks and nonbanking financial institutions such as The City Bank, National Bank Limited, Uttara Bank Limited, and IDLC Finance Limited, have started offering bank loans to enable individuals own cars and join in Uber services as partners. While a few Uber drivers know about this option but they all find it as a convenient option for them to own a car to get involved into Uber services.

Therefore, while the secondary levels of the Uber value chain actors appear to have been enjoying the uberification episode, some of the drivers and the children employed at automobile workshops have been bearing most of the social costs incurred by uberification.

Conclusions and Recommendations

It can be argued that Uber services in Dhaka city has an overall positive impact in terms of assisting physical mobility for both men and women amidst sometimes inconsistent traffic situations. It is also apparent that Uber has become an option for a handsome fair income with freedom specially for those drivers in their 20s, although Uber could not go beyond the structural patriarchal norm as no women driver has been found offering Uber services in the Dhaka city. Uber stimulated related other businesses including automobile workshop, manufacturers and marketers of automobile related products, financial institutions, and mobile network operators. However, customer/passenger and driver experience of Uber services show a mixed response and sometimes these services appear to offer a feeling of entrapment than empowerment which can be attributed to the algorithms and policies Uber follows in Bangladesh. Uber has also been incurring direct and indirect social costs and taxi cab services providers are the worst victim among the sufferers. This suffering is specifically magnified by the introduction of Uber Inter City and Uber HIRE services which were left as the only hope for the cab business in Dhaka

city after the introduction of standard Uber services. While this research identified a few resulting social costs of introduction of Uber in Dhaka city, due to the scope and design of this research, the researcher could not thematize such cost felt by the drivers of gas driven three-wheelers in the city. These drivers even called a daylong strike in Dhaka city to protest against all the online based ridesharing services. However, Uber operates its services through this gas driven three-wheelers (as Uber Auto) in some places like India and Pakistan.

In conclusion, the following recommendations can be made which reflect the analyses of this research presented in the above sections.

- Uber needs to adjust its algorithmic approach and regulating policies to make its services attractive for both the vehicle owners and the drivers. The policies need to be context sensitive and in order to ensure this Uber needs to follow the 'Ridesharing Services Principles, 2017' enacted by the GoB and if possible the 'Taxicab Service Guideline-2010' as well (BRTA, 2018). GoB should develop an effective monitoring system to enforce these principles in order to ensure fair share of benefits for both the vehicle owners and drivers as well as to support a fare ridesharing experience for the passengers.
- Uber should readdress its surge pricing algorithm because due to this algorithm sometimes UberX passengers need to pay higher fare compared to what is required by Uber Premium services for the same ride. This creates dissatisfaction among the UberX passengers who are habituated to request UberX services for a comparatively cheaper ridesharing which Uber promises. In case of fair calculation Uber needs to dynamically verify its assumptions and/or information regarding traffic situation and/or current road management information. Uber might create a provision in its App for passengers to provide current traffic situation and/or road management information, which is followed by several crowd assisted transportation app services such as Trainline.
- Uber should negotiate with the mobile phone operators to rectify the GPS signal issues so that passengers and/or drivers can overcome the problems they face with regard to operating the Uber App. Mobile phone operators need to take initiatives to upgrade technical infrastructure to address this issue.
- Uber should take initiatives to train the drivers so that passengers can enjoy a professional service instead of just the driving assistance. Although these drivers are not always fulltime Uber employees, but as they represent the Uber brand therefore Uber needs to take the responsibility to ensure professionalism through the way its drivers offer services. However, Uber also needs to take a strategic approach to educate passengers so that they can operate the Uber App smoothly

and can avoid unexpected ridesharing experiences caused by poor Uber App operating. Uber should address and minimize this service performance gap (Zeithaml, Bitner & Gremler, 2017) in order to enhance customer/passenger satisfaction and thereby increase profit.

- Uber should change its recent approach of motivating only the new users because existing frequent users/passengers feel ignored which in the long run might affect its image and profit earnings. Uber should also focus on maintaining a consistent complaint management for both the drivers and passengers. They should introduce direct hotline services for passengers and keep the existing hotline services for drivers open for 24/7 instead of only a limited period in a day.

It can be argued that like the way Uber utilized the market experience of SAM while introducing its services in Dhaka city, it can also introduce Uber Eats in the city in near future to capitalize the market opportunities of online food order services provided by Foodpanada, *Pathao*, and Hungry Naki. However, in order to enjoy a sustainable business prospect and to ensure a coherent customer/passenger equity through superior value addition, Uber now needs to consider and address the issues my research identified which are discussed under specific themes in section 5. The recommendations presented above should be considered as guidelines by Uber, GoB and/or any relevant stakeholder to facilitate a sustainable symbiotic prospect for Uber, vehicle owners, drivers and the passengers in Dhaka city.

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