

Impact of GPS Based Cab Service on Traditional Means of Public Transport in Guwahati

Masum Ahmed

Abstract: *The rapid change in the nature of tourists, tourism with natural and cultural environment necessitates new paradigm to manage tourism development. India with two biodiversity hotspots one being the Western Ghats and the other being the Eastern Himalayan region in the Indo Burma border is blessed with a very good stock of genetic, species or ecosystem diversity. Be it Religious tourism, Cultural Tourism or Eco tourism India has a vast potential.*

Keywords: *The Indo Burma Border Is Blessed With A Very Good Stock Of Genetic, Species Or Ecosystem Diversity.*

I. INTRODUCTION

Technology like anything else has both positive and negative sides. We have observed the growth of Global Positioning system (GPS) based cabs in Guwahati in the last two years or so. Is there any positive/ negative impacts of these cab services on the income of the traditional means of public transport? A proper study in this field seems to be of vital interest to us. Hence, the objective of this paper is to study the impact of emergence of GPS based cab services like Uber and Ola on the traditional means of public transport particularly on auto rickshaws and share taxis. Using primary data (and regression analysis) this paper makes a humble attempt to achieve its objective.

There have frequent strikes and protests against the GPS based cab services by the taxi drivers, auto rickshaw drivers in the capital of India namely New Delhi. Mumbai and Bengaluru. According to the livemint newspaper On 26th and 27th July 2016 NewDelhi witnessed the strike of Autorickshaws and Yellow top taxi against the GPS based cabs. The paper further said around 9000 auto rickshaws and 15000 traditional yellow topped taxis stopped working on the aforesaid days making life difficult for thousands of commuters. A week earlier the same scene could be observed in Mumbai, the financial capital of India when many taxis refused to ply in protest against Uber and Ola . However, no such strikes took place in Guwahati since 2013 . Why is it so? Is there no impact of the entry of GPS based cab services on the income of the drivers of traditional means of public transport especially on Autorickshaws and share taxis in Guwahati? The paper makes a humble attempt to find an answer to this question.

As far as methodology is concerned the paper uses Stratified random sampling technique to collect samples from many parts of Guwahati city. The paper also attempted to use Regression analysis to find the exact impact of the entry of GPS based cabs on the income of the traditional means of public transport. The findings found that the sample data was not NORMALLY DISTRIBUTED and the R2 value (coefficient of correlation) was also very low (4%). This compelled the researcher to leave the regression analysis and shift to graphical presentation of his findings.

According to Association of Radio Taxi India the taxi business in the country is growing at 20-25% per year. The organized taxi sector accounts for just four to 5 % and totals \$800 million and is expected to grow to \$7 billion by 2020.

Before moving to our findings let us have a quick glance on the company profiles of GPS cabs companies whose cars are plying in Guwahati [1].

UBER UBER is a German word meaning above, over or across. However our interest is on UBER Technologies Inc. UBER is an American worldwide online transportation network company headquartered in San Francisco, California. Uber drivers use their personal cars. As of August 2016 the service was available in over 66 countries and 507 cities worldwide. Since uber's launch several other companies have replicated its business model , a trend which is called now as "Uberification". Uber was founded as UBERCAB by Garrett Camp in 2009 and changed to UBER in 2012. Uber also offers Helicopter service with Airbus in Sao Paulo city. Revenue of the company is \$ 1.5 billion (2015) Uber operates in 18 cities of India (12th Aug 2015) [2]

II. PRICING POLICY OF UBER

Uber uses an automated algorithm to increase the price to surge level. Apart from the forces of Demand and Supply, the weather conditions , distance covered, time taken to reach destination, waiting period are the variables that set up price. All over the world Uber uses digital payment only but in India UBER accepts cash too. In May 2015 Uber started testing cash payments in Hyderabad. In September 2015 uber tied with Bharti Airtel for Airtel mobile wallet service too. It allows users to use Airtel 4G data at no extra cost in Bengaluru (this facility is not introduced in Guwahati till now [3].

In Guwahati the base fare is Rs.40 and per kilometer fare is Rs.7 and beside these the fare to be paid per minute is Rs.1 plus service tax, Swachh Bharat cess and Krishi Kalyan cess (Under normal conditions) #1

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* Correspondence Author (s)

Masum Ahmed*, PhD Research Scholar, Department of Economics, Cotton University Guwahati Assam

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III. OLA

ANI Technologies Pvt. Ltd. Is operating under the trade name Ola. Ola is an Indian online transportation network company. It was founded on 3 December 2010 by Bhavish Aggarwal and Ankit Bhati in Mumbai. Ola offers auto services besides the usual cab services .The company commands 60% of the market share in India. Ola has emerged as the clear leader in terms of market share. According to a presentation by Softbank Corp.,an investor in ola the company had a 60% share in nov 2014 based on data of registered vehicle. Ola acquired Taxiforsure in March2015 for about \$200. The combined share of ola and TaxiForSure is 80% Meru's share has dropped to 12% while uber is at 4%.Ola started its operation in December 2010.Taxiforsure was founded in June 2011.Uber entered India in December 2013.Meru, started its operation wayback in 2007, but it mostly had owned cars . Ola managed to get funding from Tiger Global in 2012and Series B from Matrix partners in 2012 ;this allowed Ola to aggregate cabs faster and innovate on the technology.ola claims 250000 vehicles on its platform including auto's and a presence in more than 100 cities. Uber operates in 18 cities(12 Aug 2015) [4] [6].

Pricing policy

The pricing policy of Ola is similar to that of Uber in India

The bill for OLA cabs consists of the following elements

1. Base fare (flat rate)
2. Distance fare (Rs.6 per km)
3. Ride time fare (charged time taken to travel)
4. Peak pricing (algorithm)
5. Service tax
6. Swach bharat Tax
7. Toll Charges.

Ola offers ola money option for payment apart from accepting cash.

Guwahati and GPS Cab Services

Guwahatiwitnessed the rise of cab services inside the city in the early part of the year 2013 . The first entrant was Prime cabs followed by Green cabs, Prime Cabs and then came Megha Cab (a cab service wholly owned and managed by women). However all of them were local in nature and depended on Interactive voice response system (IVRS) where a passenger had to call to a particular phone no. then the machine voice guided them to book a cab. These cab services did not use GPS service. They left the industry within a span of just two years due to increased competitiveness from OLA, Uber and Jugnoo.

Ola came to Guwahati in Nov 2013 and soon after that Uber started its operation too .Many drivers from the aforesaid platform to Uber and Ola. This paper will confine its study primarily to Uber and Ola [5] [7].

Why Uber (From Driver's Point Of View?)

To know why Uber is preferred by the drivers we must understand the incentive system offered to the drivers by UBER

Uber offers incentive in terms of percentage to the fare to the drivers. The drivers have to purchase a smart phone from the company.The smartphone has inbuilt UBER app.

Some smart phones are even locked so that apart from opening the uber app no other apps can work on the same mobile phone.

The incentive system is as follows

1. Morning session (6am to 9 am) 80% of the total fares collected
2. Afternoon session (9am to 6 pm) 25% and of the total fares collected
3. Evening sessions from (6pm onwards) 100% of the total fares collected.
4. Besides on Sundays incentives are higher than that of weekdays.Money is credited in the bank accounts of the drivers on weekly basis,but there may be some curtailments from the incentives mainly due to rejecting a trip by driver, and lower ratings given by the passengers and some other unknown (to drivers) reasons.
5. Ownership remains in hand
6. Flexibility of Working
Absence of direct control

Why Ola?(Driver's perspective)

1. Just like Uber, Ola too offers incentives to the car owners and or drivers but with some different terms and conditions. As per our survey we found that after 8 trips per day for each additional trip a driver paid Rs. 120 per trip to his bank account.
2. It is primarily due to this reason that Uber is way ahead of Ola in terms of no. of registered cars in Guwahati.
3. Ownership remains in hand
4. Flexibility of Working
5. Absence of direct control

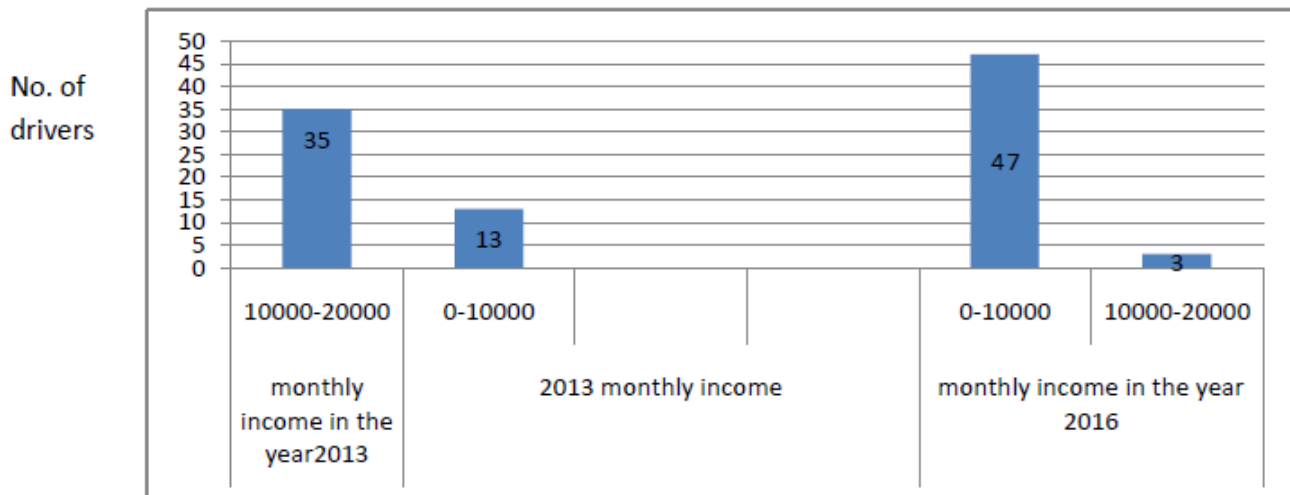
Why Uber (Passenger's Perspective)

1. Reasonable fare
2. AC cars
3. 3.Good service/ polite behavior
4. On time availability (generally within 5-10 minutes after booking)
5. Flexibility of payment (Cash/Paytm/ Airtel money/ credit card of standard chartard bank/ master card)
6. Frequent offers and free rides through referral

Why Ola (Passenger's perspective)

1. Reasonable fare
2. AC cars
3. Good service/ polite behavior
4. On time availability (generally within 5-10 minutes after booking)
5. Flexibility of payment (Cash/ ola money).]

Non GPS Based Cabs survey findings on income distribution



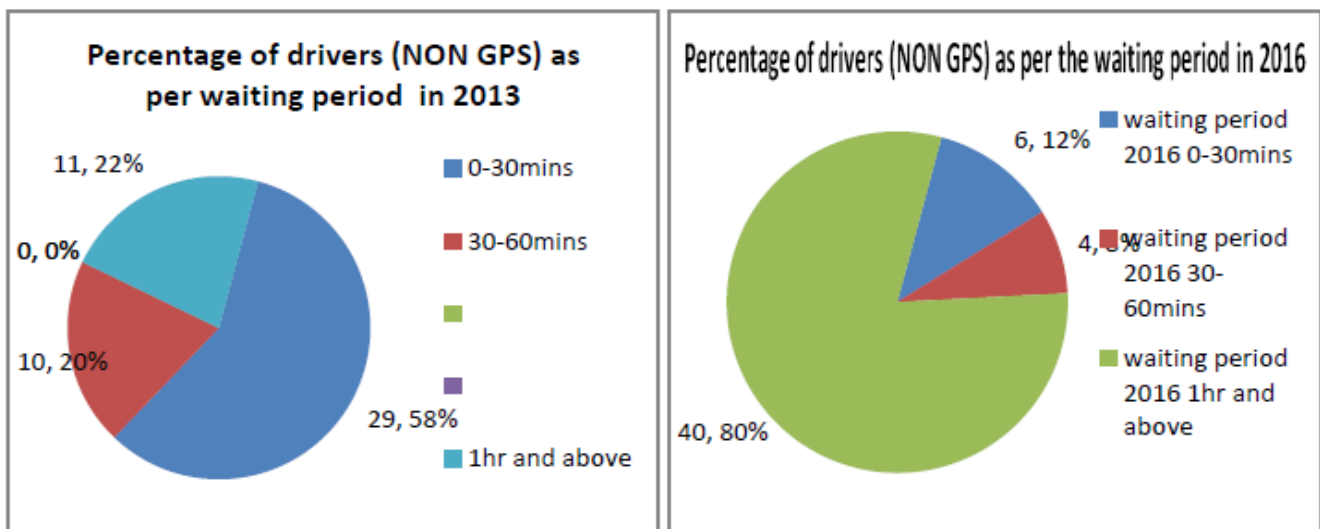
Source: Survey Conducted by Masum Ahmed and Duhuidi Terang on 29th and 30th of November 2016 . sample size 100. 50 GPS and 50 no. of GPS based cars

In the year 2013 70%(35 out of 50) of the drivers were in the income group of 10000-20000 INR per month while 30% (15out of 50) were in the income group of 10000-20000 in Guwahati .

The researcher during his survey also found that 94% (47 out of 50) of Non GPS vehicle drivers fall in the income bracket of 0-10000 INR per month in the year 2016 whereas only 6% (3 out of 50) of the same are still in the income group of 10000-20000 INR per month.

The above findings clearly reveal that there has been a drastic shift in the income pattern of the drivers of traditional means of public transport in Guwahati.

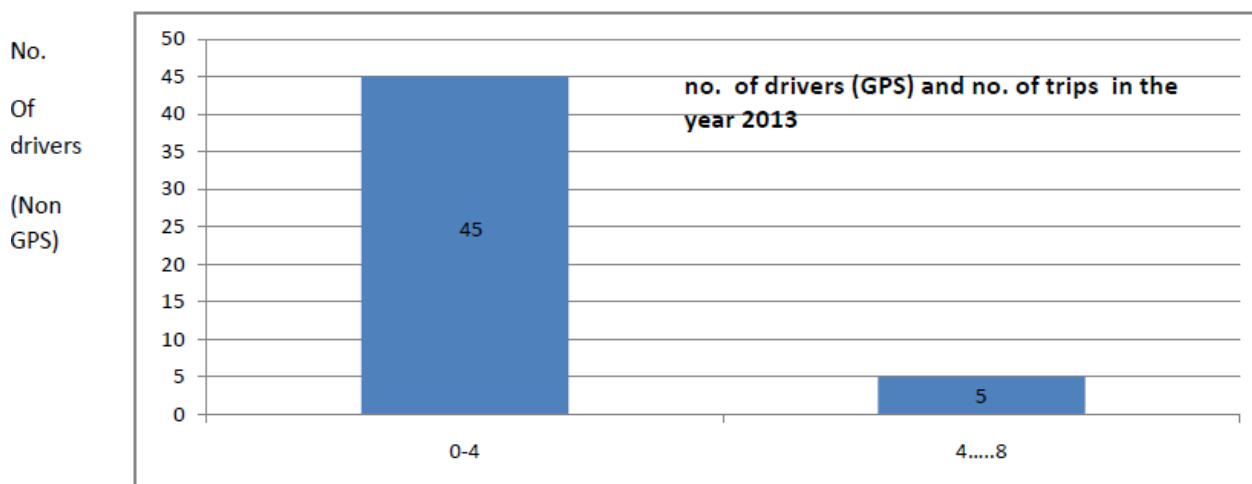
The waiting period for getting the next commuter has also changed a lot mostly in against favor of the traditional means of public transport during the same period. This can be understood with the help of the following pie diagrams.



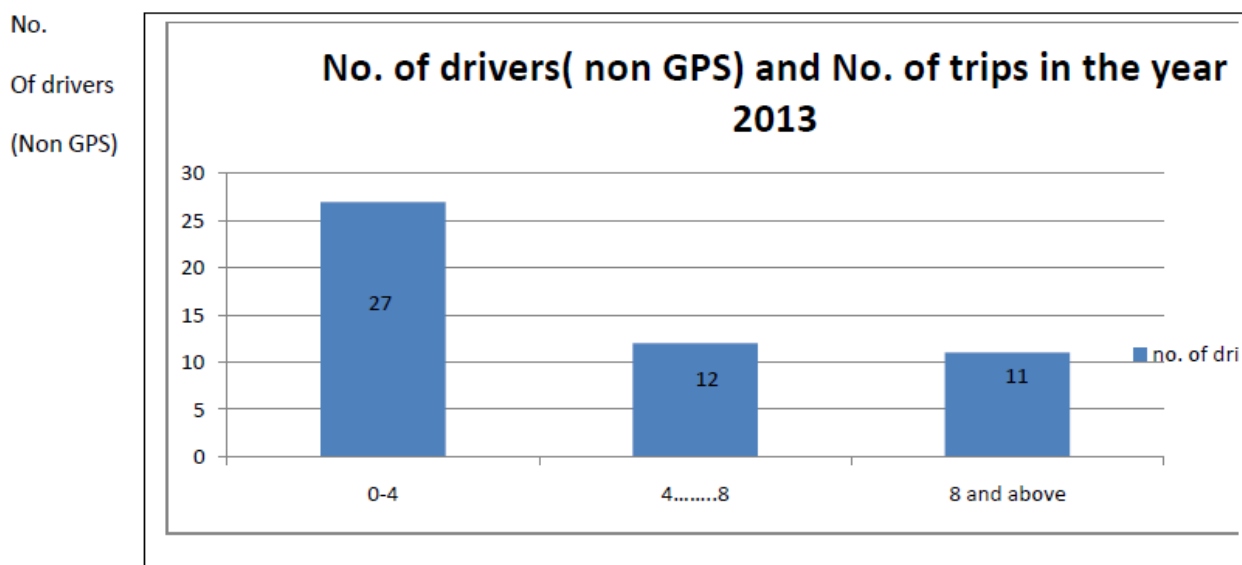
Source: Survey Conducted by Masum Ahmed and Duhuidi Terang on 29th and 30th of November 2016 in Guwahati . sample size 100. 50 GPS and 50 no. GPS based cars

The first pie chart reveals clearly that in the year 2013 58% drivers had to wait for 0-30 minutes for their next passenger while in 2016 the same has reduced to mere 12%

and 80% non gps drivers have to wait for 1hr or more for next passenger.



No. of trips per day



No. of trips per day

The above figures show that how no. of trips per day has come down for non GPS based cars.

However the no. trips keeps on varying depending upon the no. trains for the share taxis that ply from Guwahati railway station (Paltanbazar area) to Shillong. Uber offers a ride from guwahati to shilling at RS 1500 flat while the share taxis charge a much lower fare i.e Rs.1200 for bthe same. This is probably the reason why uber has failed to attract the passengers in this route. (ola limits its operation primarily within the city only)

Our survey further reveals that none of the Autorickshaw drivers follow fare meter in Guwahati and they are not even ready to accept GPS based meters due to some practical reasons like theft of it, poor economic conditions so on. While almost 80% of the drivers don't expect anything from the govt. The rest seek either (i) a pension after 70 years of age or (ii) unemployment allowance from the govt.

Some Auto rickshaws from Hengerabari and Lakhtokia areas want CNG based autos. When asked about cost of upgrading the present engines which run on Petrol they told us that changing carborator which costs around Rs.5000-10000 will be enough. They demand the govt. of Assam particularly the Dept. of Transport to set CNG fuel stations

in guwahati. This will help the drivers to reduce their cost upto a great extent and compete with the GPS based cabs.

We have also observed that 94.8% of the UBER and ola cars are Maruti Alto 800 the rest cars are very few in number. Clearly sales of Maruti SUZuki Alto 800 and Alto K10 has shown an increasing trend in Guwahati in the past copule of years due to the strong backward linkage between the growth of GPS based cabs and the sales of the aforesaid models of cars.

Malpractices followed by the drivers

1. A few drivers register themselves with both ola and uber as well as Jugnoo. However this may create difficulty for them too. Consider a situation when a driver gets a booking from 3 platforms simultaneously then have to reject 2 booking and accept only one. This creates a cut in his incentive from the called platforms.

2. To surge price many drivers decide to turn off their mobile phone simultaneously and reducing supply of cab services, given the demand this increases the fare up to multiple times of the normal fare.

Malpractices followed by the Passengers

1. Consider the following

A passenger book more than one cabs using different phones simultaneously and takes the cab which reaches him/her the first. The other cabs have to come in vein because

- (a) They don't know about this behavior the potential passenger and
- (b) They can't cancel the trip in the fear of penalty.

But to deal with such malpractices uber has built a mechanism where , if a trip is cancelled by the passenger when the driver is about to pick him up then a penalty of Rs.40 will be imposed on the consumer from his digital wallet. In case the passenger chooses cash as a means of payment this Rs.40 will be added to the bill to his next trip.

Religion and Driving

36 drivers out 50 drivers were Hindu and 4 drivers belonged to Islam. 10 drivers did not like to reveal their religion. Clearly persons from Sikhism, Jainism, and Christianity form a minuscule part of the driver community in Guwahati. Proper step is needed to bring them in this sector also.

Reasons for the fall of Income of Non GPS based cab drivers (including Auto rickshaws)

Our survey reveals the following causes for the fall in the income of the non GPS based cab drivers

1. Emergence of GPS based and Radio taxis (83% drivers accept this view)
2. Increase in the no. cars plying on road both private as well as public transport (2% drivers accept this view)
3. Cash crunch due to demonetization policy of the govt. (15% drivers accept this view)

From the above observations it is clear that yes emergence of GPS based cabs is partially responsible for the fall of income of the traditional means of public transport.

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