

# “THE ROLE OF AGGREGATED TAXIS IN URBAN MOBILITY”

## – CASE OF AHMEDABAD, GUJARAT, INDIA

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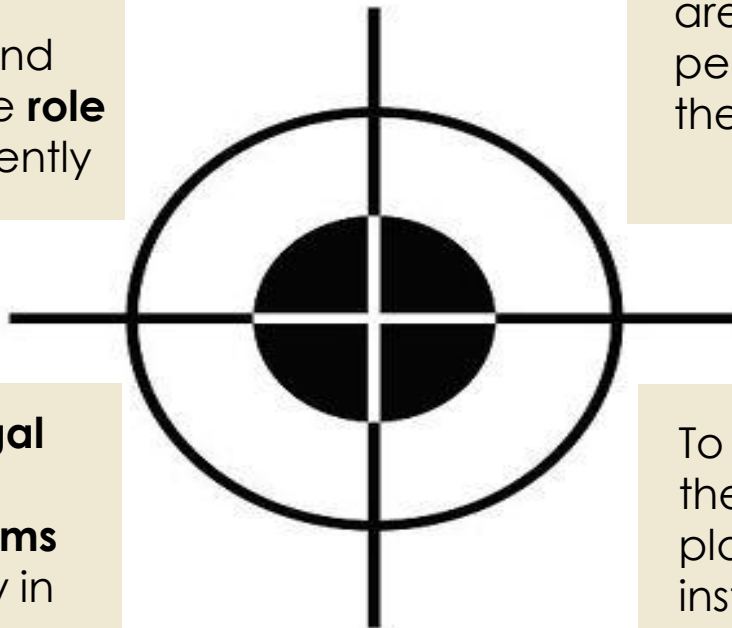
# CHANGING ROLE OF TAXIS IN INDIAN TRANSIT MARKET

- Private taxis since they have been introduced, have gained popularity in a certain group of people, and their **market share is growing**.
- Aggregator Taxis are still quite new in India and there are not many studies done in terms of their **contribution to urban mobility** in Indian context.
- Hence the need for an **empirical assessment** on how their **model** works and **what role they play in urban mobility**.

# AREAS OF ASSESSMENT FOR AGGREGATED TAXI MARKET

To **trace** the **establishment** and **growth** of aggregated taxis in **Ahmedabad**, India and to understand the **role** they are playing currently

To understand the **constraints/ challenges** they are faced with in performing/moving towards their envisaged role?



To understand the **legal frame work** and **institutional mechanisms** they need to follow in order to operate these taxis

To assess the **potential role** they may be expected to play as visualised by public institutions and also their own definition in a **multi-modal transit system framework**

## WHAT ARE THE THINGS THAT FIRST COME TO OUR MIND WHEN WE THINK ABOUT TAXIS?

1. Are taxis **improving connectivity** in the city?
2. What **impact** do taxis have on the city?
3. Are taxis **expensive** and serve only the rich?
4. Have taxis **improved the safety** and security of the users?
5. How **affordable** are the taxis?
6. Are they **competitors** to the **IPT**?
7. Are they **competitors** to **PT**?
8. Can they be **complementary** to **PT**?
9. Can taxis **reduce congestion**?
10. Are they able to **reduce parking demand**?



- APPLICABLE ALL OVER INDIA
- REGISTRATION-application to the central government is given  
Stating-type of vehicle, its use, design construction
- Renew the certificate after every 3 years,  
If the owner fails to do so, he is fined, fine amount differs for different time periods
- PRIVATE SERVICE VEHICLES SUCH AS MAXI,CAB, MOTOR CAB, STAGE CARRIAGES, TOURIST VEHICLES ETC

# LEGAL SCENARIO FOR TAXIS IN AHMEDABAD

**Article 74 in 1988** was made for the radio taxis, which had instructions for all the stakeholders of the taxi market. This was introduced to make safe and easy mobility for the women and the elderly.

## THE TAXI OFFICES:

- **Register with RTO**, form fill up.
- Give **details of each driver, vehicles**.
- The drivers must have **valid license** and police verifications.
- **Update RTO** in case of any changes (change in models, drivers)
- Have proper **parking space** for the number of vehicles they own.
- The model should **fulfil the requirements**, like engine capacity(150cc), GPRS installed etc.
- If the vehicle is in some trouble in the middle of the trip, it is the company's duty to make the customer reach to his/her destination safely.
- The customer should be given a leaflet containing important information and phone numbers in case of emergency by the driver as soon as he enters the vehicle

## ROLE OF RTO:

- The data is then tied up with the police stations, to get the exact tracking
- Verification of the details are being done by the officer in charge to give the permission

## 1. LICENSEE'S PROFILE

1. The licensee shall be a **taxi service provider**.
2. The licence will be granted to a firm or a company registered under **the Companies Act, 1956** mandated to provide public transport services.
3. The licensee will abide by all relevant statutes as may be applicable including **the MV Act, 1988 and the IT Act, 2000** ( as amended from time to time) and the rules made thereunder  
ETC.....

## 2. VEHICLE PROFILE

1. The Taxi should be driven on clean fuel. The Taxi should meet **emission standards** as prescribed from time to time by the **Transport Department**.
2. The Taxi shall be suitably **insured commercially** as prescribed from time to time under applicable Laws of India
3. Taxi shall be fitted **with GPS and GPRS** based tracking device, printer, and a display panel showing the path traversed and total distance covered.  
ETC,.....

## 3. ARRANGEMENTS FOR SERVICES

1. **Working hours** of drivers is to be limited in accordance to the **Motor Transport Workers Act, 1961**.
2. The licensee may seek passengers through telephone calls, mobile' or web based applications
3. The licensee shall provide the Taxi services **round the clock.** '
4. The Taxi is permitted to ply within the geographical limits of **RTO Region**.  
ETC....

## Aggregated **taxis OFFICES,** **RTO, AGGREGATED AUTOS**



## Aggregated **taxis USERS**



### Working professionals

100 samples

- Jobs
- Business
- Corporate
- etc



### Non Working

100 samples

- Students
- Housewives
- Elderly
- etc

## Aggregated **taxis DRIVERS**



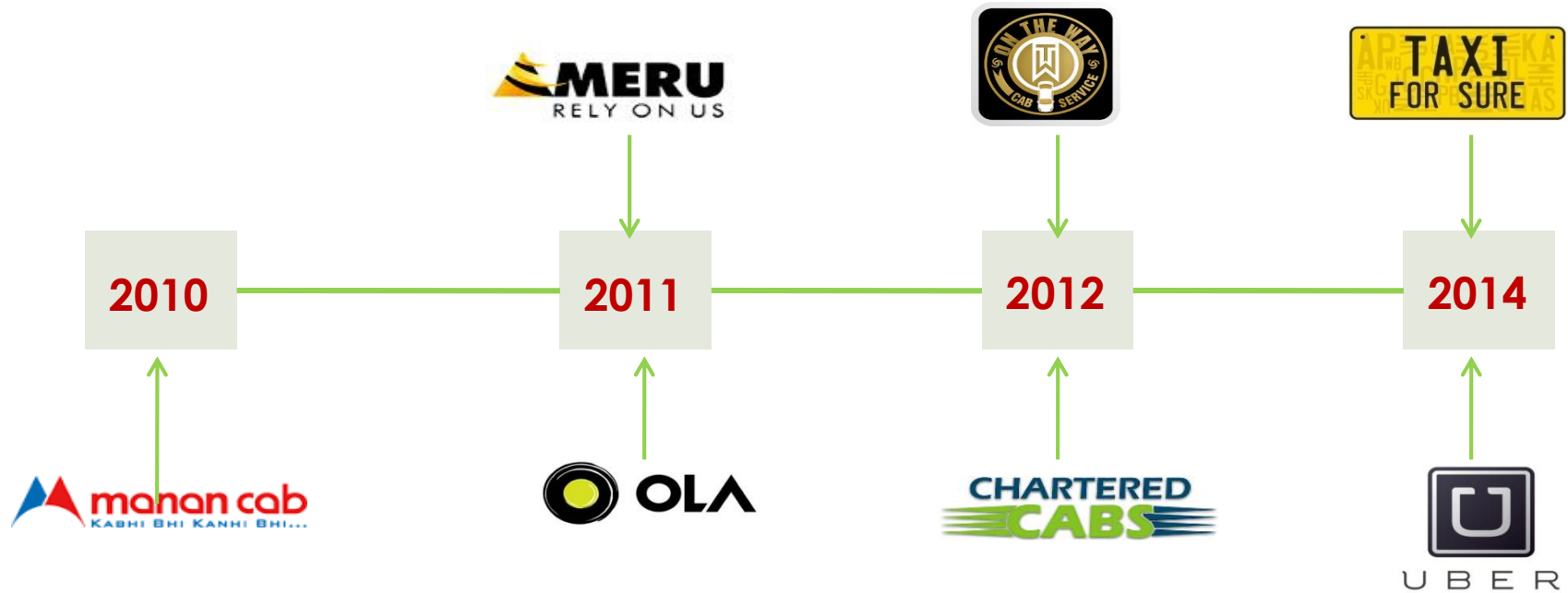
Focused Group  
Discussions were done  
with drivers involved with  
Vendor Attached  
Models.

3 FGDs










# Aggregated **taxi OFFICES**








## YEAR OF ESTABLISHMENT IN AHMEDABAD










# Aggregated **taxi OFFICES**

	FLEET SIZE	OWNERSHIP MODEL	COMPLAINTS & REDRESSAL
 U B E R	NA	1. D.C.O- Driver-cum-Operator Model	App based support@uber.com
	2500-3000	1. D.C.O- Driver-cum-Operator Model 2. O.M- Operator Model/ Multiple Micro Entrepreneur Model	SUPPORT FUNCTION TECHNICAL, FINANCIAL, DRIVER/MODEL RELATED support@olacabs.com
	2000 (350 active cabs)	1. D.C.O- Driver-cum-Operator Model 2. O.M- Operator Model/ Multiple Micro Entrepreneur Model	SUPPORT FUNCTION TECHNICAL, FINANCIAL, DRIVER/MODEL RELATED <b>Call centers</b>
	259	1. D.C.O- Driver-cum-Operator Model 2. VENDOR ATTACHED MODELS	Call centers
	NA	1. D.C.O- Driver-cum-Operator Model 2. VENDOR ATTACHED MODELS	Call centers
	60	1. D.C.O- Driver-cum-Operator Model 2. VENDOR ATTACHED MODELS	Call centers
	50	1. D.C.O- Driver-cum-Operator Model 2. VENDOR ATTACHED MODELS	Call centers

# Aggregated **taxi OFFICES**

	<b>DRIVER SELECTION CRITERIA</b>	<b>MODEL SELECTION CRITERIA</b>	<b>SERVICES PROVIDED</b>
	<ol style="list-style-type: none"> <li>1. Licence</li> <li>2. Police verification</li> <li>3. LMV Cab license and Taxi Badge</li> </ol>	<ol style="list-style-type: none"> <li>1. Just the quality of the car</li> <li>2. No stickers on the car</li> <li>3. Customer preferences</li> </ol>	tie ups with restaurants, Uber Approved
	<ol style="list-style-type: none"> <li>1. Licence</li> <li>2. Police verification</li> <li>3. LMV Cab license and Taxi Badge</li> </ol>	<ol style="list-style-type: none"> <li>1. GPS/CNG Check</li> <li>2. Not more than 5 yrs</li> <li>3. Customer preferences</li> </ol>	Mini, sedans, autos, Ola Corporate
	<ol style="list-style-type: none"> <li>1. Licence</li> <li>2. Police verification</li> <li>3. LMV Cab license and Taxi Badge</li> </ol>	<ol style="list-style-type: none"> <li>1. GPS/CNG Check</li> <li>2. Not more than 5 yrs</li> <li>3. Customer preferences</li> </ol>	Mini, Sedans, hatch backs
	<ol style="list-style-type: none"> <li>1. Licence</li> <li>2. Police verification</li> <li>3. LMV Cab license and Taxi Badge</li> </ol>	<ol style="list-style-type: none"> <li>1. GPS/CNG Check</li> <li>2. Not more than 3 yrs</li> <li>3. Customer preferences</li> </ol>	<ol style="list-style-type: none"> <li>1. CORPORATE PACKAGES</li> <li>2. ONE WAY DROP FACILITIES</li> <li>3. CALL/APP BASED BOOKINGS</li> <li>4. EVENTS AND CONFERENCE</li> <li>5. FEMALE EMPLOY CONVEYANCE</li> </ol>
	<ol style="list-style-type: none"> <li>1. Licence</li> <li>2. Police verification</li> <li>3. LMV Cab license and Taxi Badge</li> </ol>	<ol style="list-style-type: none"> <li>1. GPS/CNG Check</li> <li>2. Not more than 5 yrs</li> <li>3. Customer preferences</li> </ol>	Mini, sedans, hatch backs
	<ol style="list-style-type: none"> <li>4. Eye check up</li> <li>5. Driver should not be working anywhere else</li> </ol>	<ol style="list-style-type: none"> <li>1. GPS/CNG Check</li> <li>2. Not more than 3 yrs</li> <li>3. Customer preferences</li> </ol>	Mini, sedans, insurance, Whats App, Call booking
	<ol style="list-style-type: none"> <li>1. Licence</li> <li>2. Police verification</li> <li>3. LMV Cab license and Taxi Badge</li> </ol>	<ol style="list-style-type: none"> <li>1. GPS/CNG Check</li> <li>2. Not more than 3 yrs</li> <li>3. Customer preferences</li> </ol>	Mini, sedans, hatch backs

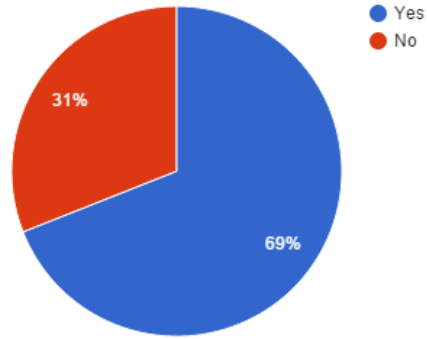
# Aggregated **taxi OFFICES**

	CHALLENGES FACED	EXPECTATIONS FROM THE GOVERNMENT	OPINION ON MMI
 U B E R	<ul style="list-style-type: none"> <li>•Awareness among drivers and customers</li> <li>•Breaking the habit, competition with TW and Autos</li> </ul>	<ul style="list-style-type: none"> <li>•Spread digital awareness</li> <li>•Standardization</li> </ul>	<p>“we look forward to such integration. we can work this out”</p>
	<p>Same as above</p>	<ul style="list-style-type: none"> <li>•Create financial accessibility</li> <li>•Spread digital awareness</li> </ul>	<p>“it is very interesting, and would love to participate. We would love to grow and provide end to end connectivity, so why not? Let me know what happens”</p>
	<p>Same as above</p>	<ul style="list-style-type: none"> <li>•Create financial accessibility</li> <li>•Spread digital awareness</li> </ul>	<p>“it would be great if all the decision making authorities and the corporate are invited and some kind of participative decision is being made. Like the government and the aggregators decide on some model. This will pay off. Very interesting and can happen”</p>
	<p>Same as above</p>	<p>NA</p>	<p>“if such kind of collaborations happens, it would be great. In some PPP basis. “</p>
	<p>Same as above</p>	<p>NA</p>	<p>NA</p>
	<p>Same as above</p>	<ul style="list-style-type: none"> <li>•Standardization, border tax, police verification-optional</li> </ul>	<p>“if AMC is ready to give such kind of integration, that would be great. We would love to do such collaborations. Some smart card should be there.”</p>
	<p>Same as above</p>	<p>NA</p>	<p>“Does not apply to smaller cities, but in larger cities, it would definitely work out”</p>

## AGGREGATED AUTO RIKSHAWS SCENARIO FOR TAXIS IN AHMEDABAD

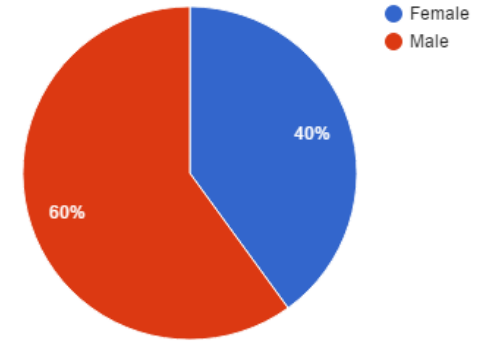


- They feel that taxis are a **threat to the conventional autos**. Therefore joined these aggregated models.
- Taxis have **taken over the long distance trips** such as airport trips where they earlier used to earn the maximum.
- The market is not that great. Leading is the Ola autos, then jugnoo, and G autos are almost nil.
- The drivers **do not gain any profit** by running these aggregated models, and feel that the conventional system is better, in terms of **cost and waiting time** for a customer.
- Most of the aggregated auto drivers are **switching over to the conventional modes** of auto as they feel that only the company and the customers are profiting by it.

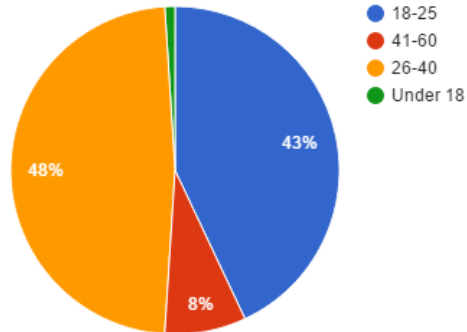


TAXI USERS IN AHMEDABAD

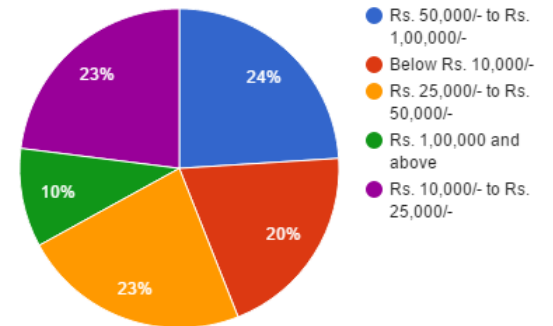
USER CHARACTERISTICS (69%)



GENDER OF THE USERS



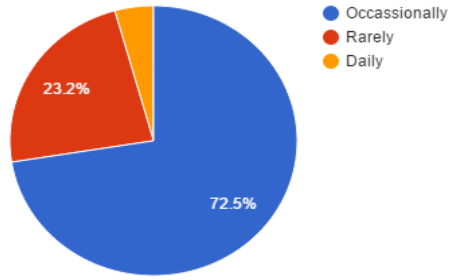
AGE OF THE USERS



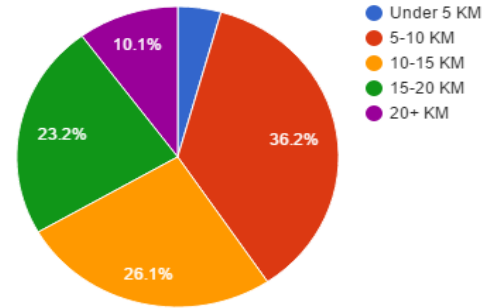
MONTHLY INCOME OF THE USERS

# TRIP CHARACTERISTICS

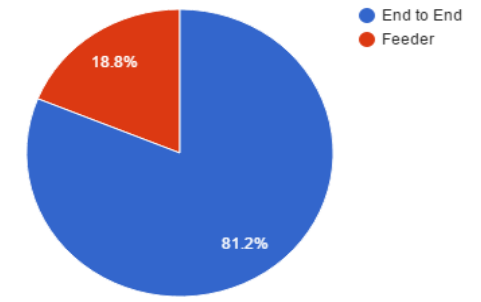
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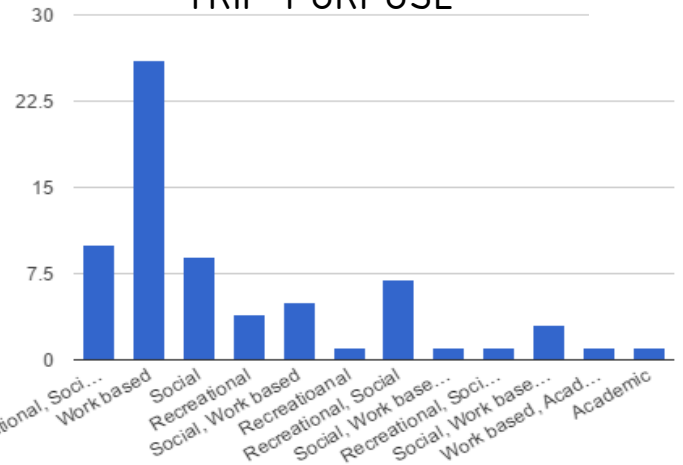
TRIPLENGTH



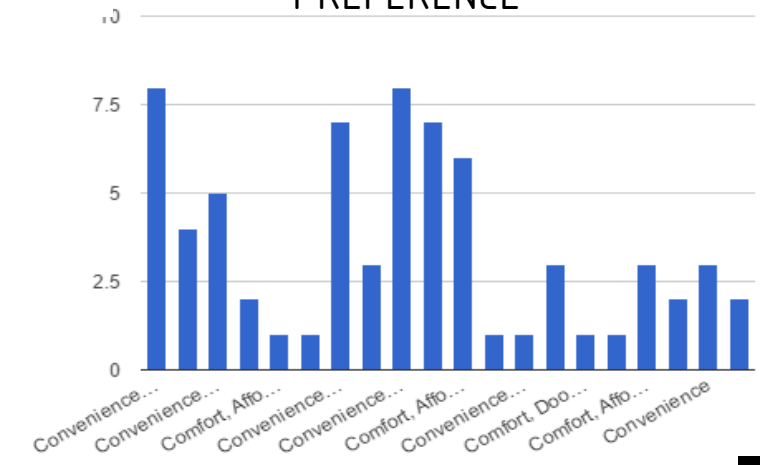
TRIP TYPE

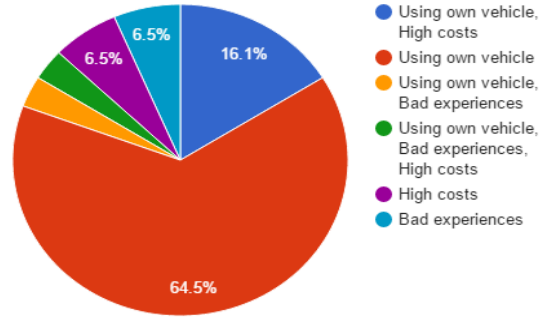


TRIP PURPOSE



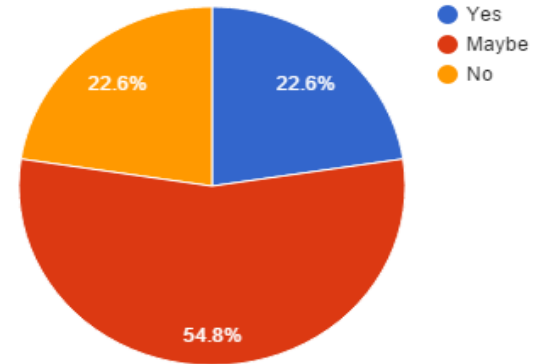
PREFERENCE





REASONS FOR NOT USING AGGREGATED TAXIS

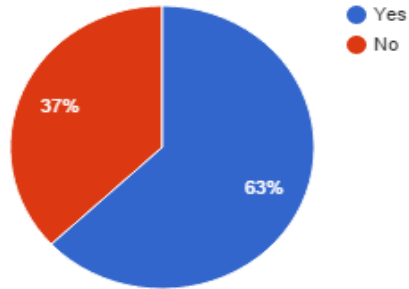
NON-USER  
CHARACTERISTICS  
(31%)



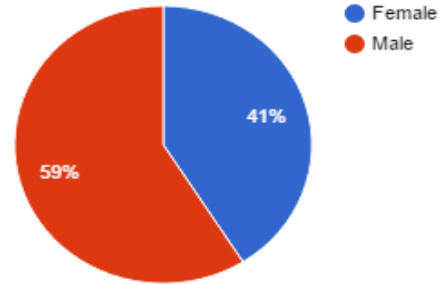
WILLINGNESS TO SHIFT FOR TAXI NON USERS



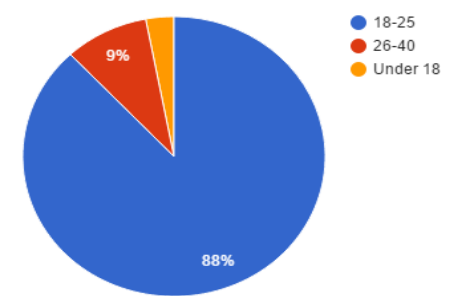
USER CHARACTERISTICS



USERS OF TAXIS

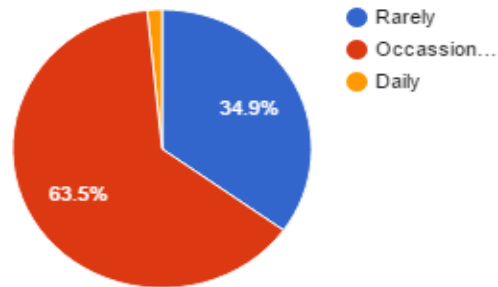


GENDER OF THE USERS

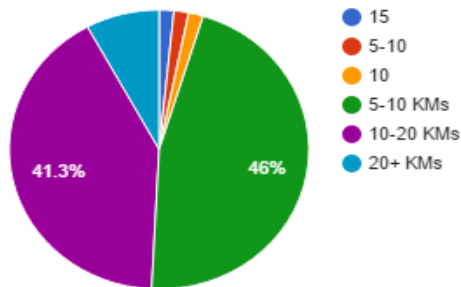


AGE OF THE USERS

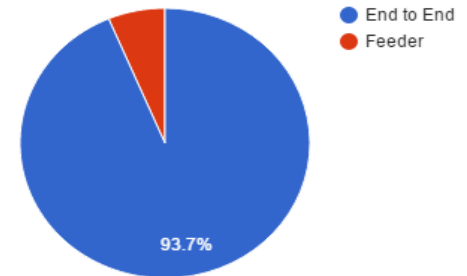
TRIP CHARACTERISTICS



FREQUENCY



TRIP LENGTH

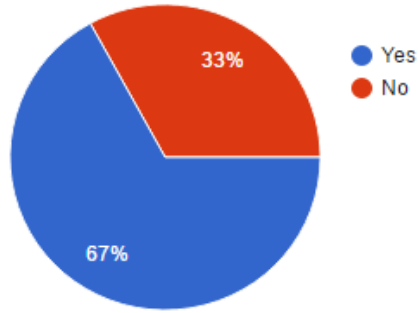


TRIP TYPE

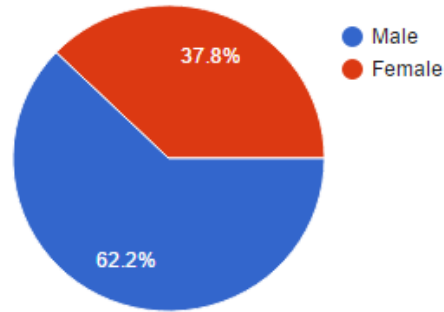


# Aggregated **taxi USERS** - "OVERALL" 200 SAMPLES

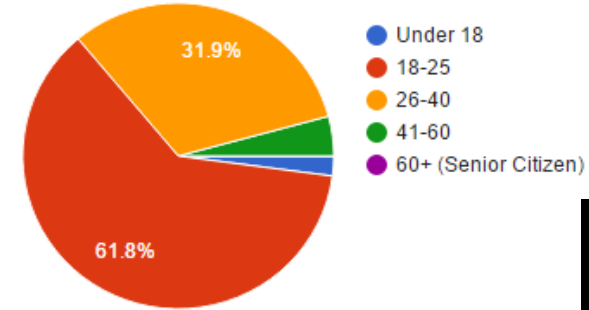
# INFERENCES



TAXI USERS

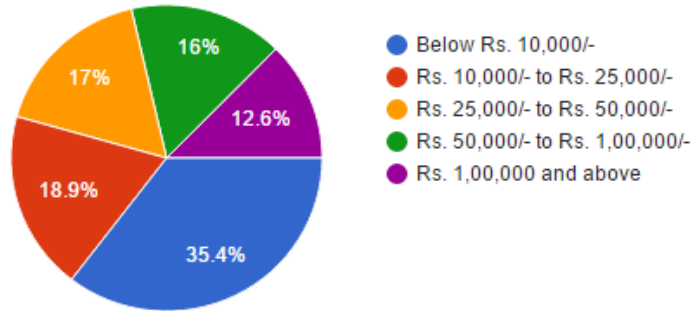


GENDER OF THE USERS

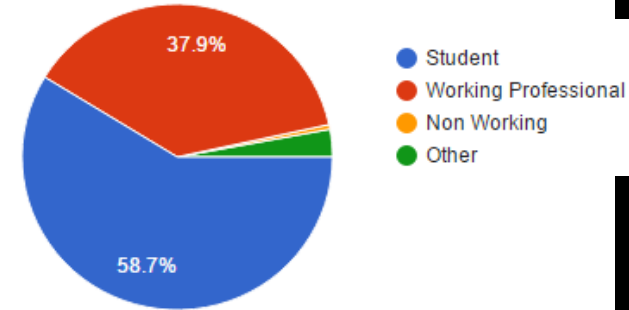


AGE OF THE USERS

## USER CHARACTERISTICS (67%)



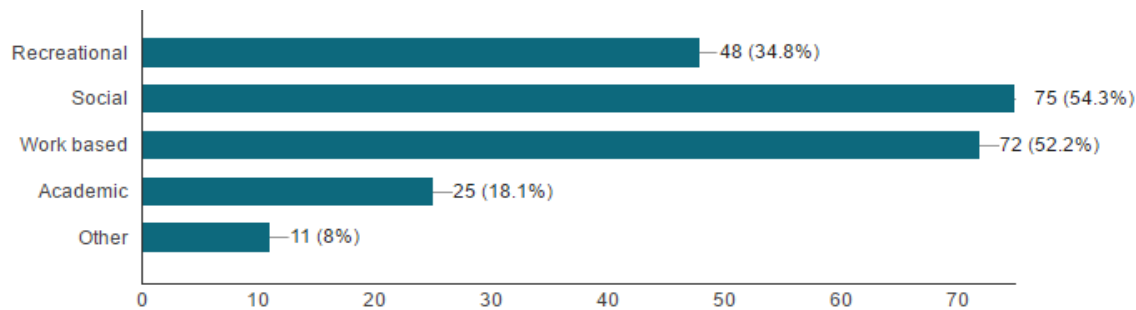
MONTHLY INCOME OF THE USERS



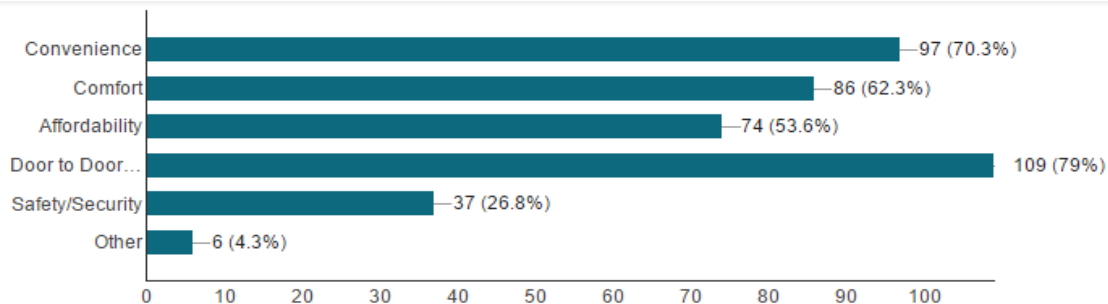
PROFESSION OF THE USERS

TRIP CHARACTERISTICS

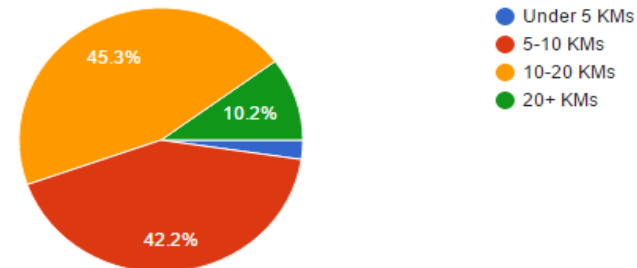
TRIP PURPOSE



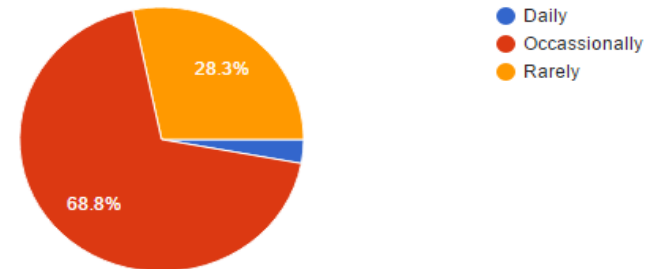
PREFERENCE



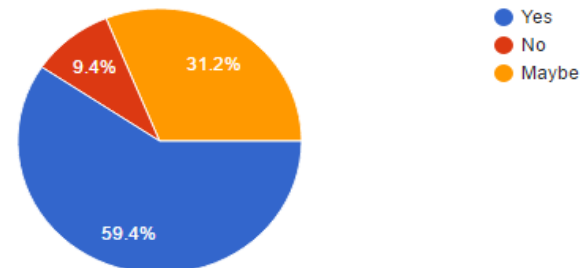
TRIP LENGTH



FREQUENCY



WILLINGNESS TO SHIFT



**POSITIVE:**

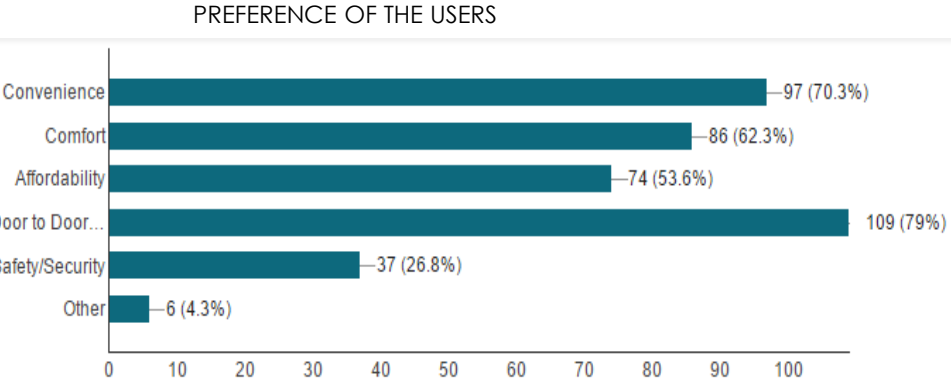
- most drivers have **migrated from other professions** (15% previously call taxi, interstate cabs)
- **Investment** in taxis done privately on bank loans
- Some drivers are investing in more vehicles and **employ other drivers** on a fixed monthly salary basis (Krishna Cabs)
- Drivers are operating for **several aggregators** at the same time
- majority of the drivers belong to the **LOW INCOME GROUPS**
- **Training** in customer service, road safety, traffic rules, usage of devices , and emergency procedures are given
- Lure of making **more money** by doing **more trips** due to milestone bonuses

**NEGATIVE:**

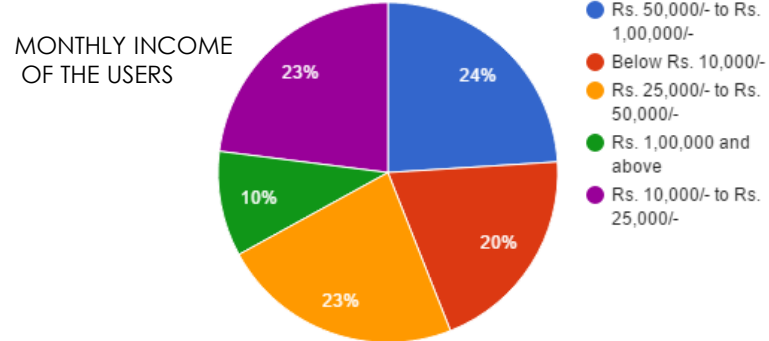
- **Insurance** are not taken care of.
- Drivers feel **insecure** about the earning potential of the job due to fluctuating compensation.
- **Rating systems** affect drivers wages
- **Older taxis not supported** by aggregators
- **No assurance** or **job security** provided by aggregators

# CONCLUSIONS

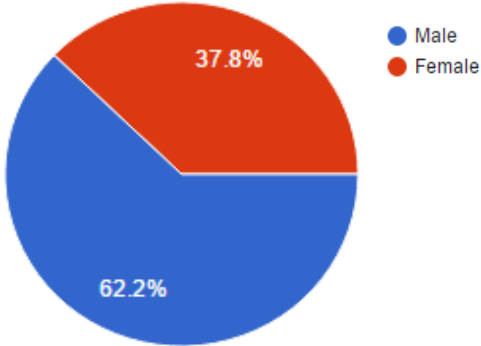
Have taxis improved the **connectivity** in the city?



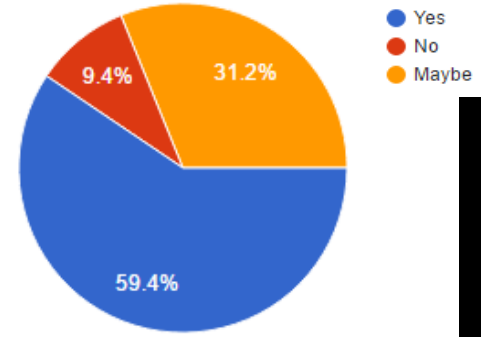
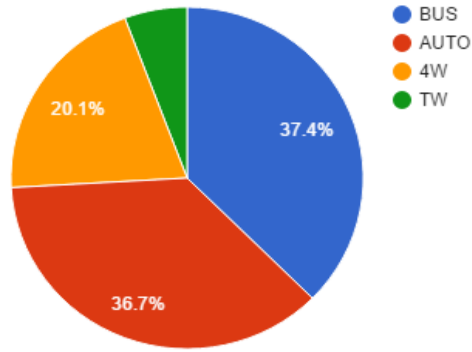
Are taxis **expensive** and serving only the rich?



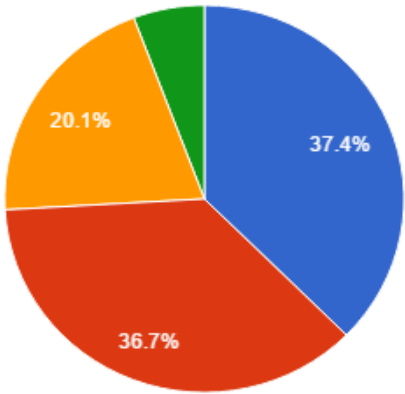
Have taxis **improved the safety** and security of the users?



Can taxis **reduce congestion**?



## Are they **competitors** to PT?

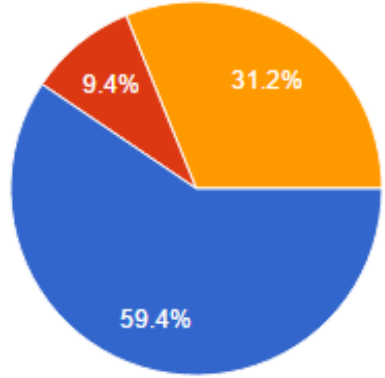


- BUS
- AUTO
- 4W
- TW

DOOR TO DOOR  
CONNECTIVITY, WAITING  
TIME, CONVEINENCE

MODE SHIFT OF THE USERS

## Can they be **complementary** to PT?



- Yes
- No
- Maybe

POSITIVE FEEDBACK  
FROM OFFICES, RTO,  
AND USERS

WILLINGNESS TO SHIFT OF THE USERS

## Are they **competitors** to the IPT?

- Aggregated autos are very small in number and new in market.
- Conventional autos- yes for long trips

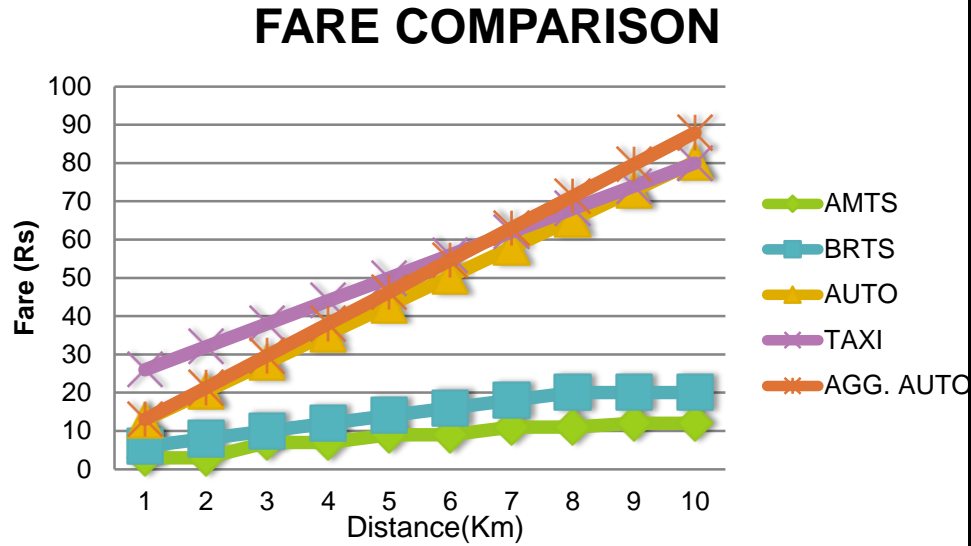
## What **impact** do taxis have on the city?

- Increase demand and supply
- Increase in number of choices
- Improve connectivity
- Increase employment
- Overall-positive

How **affordable** are the taxis?

What is the **Feasible distance** to take a taxi?

K M	AMTS	BRTS	AUTO	TAXI (Micro)	AGG. AUTO
1	3	6	12.85	26	13
2	3	8	20.4	32	21.33
3	7	10	27.9	38	29.66
4	7	12	35.4	44	37.99
5	9	14	42.9	50	46.32
6	9	16	50.4	56	54.65
7	11	18	57.9	62	62.98
8	11	20	65.35	68	71.31
9	12	20	72.85	74	79.64
10	12	20	80.35	80	87.97



PER KILOMETER FARE FOR DIFFERENT MODES OF TRAVEL

FARE COMPARISON FOR DIFFERENT MODES OF TRAVEL

### OTHER FACTORS:

- Round the clock availability
- Night time charges
- Comfort , convenience, door to door



# SUMMARY OF FINDINGS

PERCEPTION	HYPOTHESIS	JUSTIFICATION
Taxis are <b>improving connectivity</b> in the city	CONFIRMED	Caters to areas where other modes of transport are remotely available
Taxis <b>serve only the rich</b>	INCONCLUSIVE	Caters to all groups, dominantly HIG and MIG, poor people are marginalised.
Taxis <b>improved safety and security</b> of the users	INSIGNIFICANT	Only 37.8% female users, and safety security preference is 26.8%
Taxis <b>reduce congestion</b>	NOT TRUE	20% of car users are moving to taxis. Still trips remain same switching from pvt. Car to taxis or 2W to taxis.
Taxis are <b>competitors to IPT</b>	INCONCLUSIVE	Aggregated autos are very new in the market and are very small in number to compare
Taxis are <b>competitors to Public Transport</b>	CONFIRMED	37%of the taxi users were using PT earlier
Taxis can be <b>complementary to PT</b>	CONFIRMED	Positive answers from govt, offices and users (60%)
Taxis have an <b>overall positive impact</b>	CONFIRMED	<ul style="list-style-type: none"> <li>• Increase in employment</li> <li>• Increase supply</li> <li>• More choice to the customers</li> <li>• Increased mobility</li> </ul>
Taxis have reduced <b>Parking Demand</b>	CONFIRMED	Increased utilization of vehicles

# PRINCIPLES FOR GUIDELINES OF TAXI POLICY MORTH, GOI (2016)

**Facilitating public convenience** with regard to mobility

Ensuring **safe and secured** environment for passenger mobility.

Reducing pollution and consequent stress on environment

The taxis must conform to all the **regulations** laid down by the transport department including fuel.

Simplifying the transport systems by removing artificial restrictions in the mobility trade

**Reducing congestion on streets** and emphasize more on creation of infrastructure for parking.

# PRINCIPLES FOR GUIDELINES OF TAXI POLICY MORTH, GOI (2016)

**Recognition of right to conduct business** including taxi operations.

**Promoting shared mobility** and a shift from personalized transport to public transport.

**Ensuring optimal asset utilization**

city taxis may be **permitted to be aggregated** to promote the asset utilisation

**seat sharing** should be permitted in the taxis operated by aggregators  
subject to the express consent of the passengers

create **special Taxi Parking zones**.

tariffs of deluxe taxi segment should not be controlled **and market dynamics** should be  
allowed to determine the tariffs

For economy taxis, States may fix minimum as well as maximum fares charged by the  
aggregators

# POLICY IMPERATIVES ENABLING SUSTAINABLE TAXI OPERATING ENVIRONMENT

1. The **role of local and economic taxis** needs redefinition in light of their over aged fleet, low ridership, poor productivity etc.

2. Need to **evolve concept of pooled taxi** with pre-defined station influence zones with advantages such as:

1. Minimize the multiple problems of parking congestion and dispersal faced at stations.
2. Prevent the misuse of taxi stands used by private taxi.
3. Facilitate towards the establishment of integrated public transport system.

3. Need to develop **taxi typology allocation policy** in which App based cabs, Radio taxi and tourist taxi will have a predominate share in taxi fleet

4. **Service delivery benchmarking** must be introduced as a part of redefined taxi policy made co-terminus with taxi fitness schedule 5. Need for **clear policy** specifying the parameters and regulations applicable for app based sharing of private cars

😊 THANK YOU 😊

