

**PROJECT REPORT ON
CONSUMER PREFERENCES AND PATTERN OF
APP BASED CAB USERS**

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CERTIFICATE

This is to certify that the work titled “Consumer preferences and pattern of App based cab users” as part of the final year Major Project submitted by Ankita Chawla in the 4th Semester of MBA, Delhi School of Management, Delhi Technological University during January- May 2021 is her original work and it has not been submitted anywhere else for any credits/ degree whatsoever.

The project is submitted to Delhi School of Management, Delhi Technological University in partial requirement for the award of the degree of Master of Business Administration.

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DECLARATION

I hereby declare that the work titled “Consumer preferences and pattern of App based cap users” as part of the final year Major Research Project submitted by me in the 4th Semester of MBA, Delhi school of Management, Delhi Technological University, during January- May 2021 under the guidance of Dr.Abhinav Chaudhary is my original work and it has not been submitted anywhere else.

The report has been prepared by me in my own words and has not been copied from elsewhere. Anything written in this report which is not my original work has been duly and appropriately cited/referred and acknowledged.

ACKNOWLEDGEMENT

It is a pleasure for me to acknowledge the help and guidance received during the research work. I would like to thank my faculty advisor Dr. Abhinav Chaudhary, who helped me to take up the topic “ Consumer preferences and pattern of app based cab users” and guided me to complete this project properly. The project undertaken provided a platform and an opportunity to explore the areas of Marketing and Consumer Behavior.

I am highly indebted to Delhi school of Management, Delhi Technological University for giving me an opportunity to work on this project. Lastly, I would like to express my gratitude to all the honorable faculty members for sharing their experience and expertise on this project.

I have sincerely put all my efforts to ensure that the project is completed in best possible manner and also ensured that it is error free.

ABSTRACT

The transportation facilities have undergone a tremendous change in the past decade. Apart from the existing public taxi market, the private players in this market have also expanded at a faster rate, with many new up comers entering the market in recent years. Out of the various modes of transportation, cabs are the means that have become an important mode of transportation in India's metropolitan and other cities. The rental industry of cabs is constantly expanding thanks to technological advancements.

Ola and Uber, two modern taxi players, among others which use mobile applications so as to provide their services to riders, providing greater accessibility and comfort than previous taxi operators. The taxi market which is public in nature consisted of taxis that were too old, with little or no comfort and no safety measures, whereas the taxis in the taxi market which is private in nature are modern, with features such as GPS, better comfort, and safety. As a result, as of today, riders have a plethora of options when it comes to selecting a taxi service.

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CHAPTER 1

INTRODUCTION

Customers in the modern era use mobile apps to book cabs at any time and from any location in urban areas. Cab operators' pricing strategy had been positively influencing customers to book a cab instead of traditional modes of transportation such as autos and local buses, etc. The car rental industry, like most others, has undergone significant change as a result of internet technology. Because of the fierce competition among organised cab operators, consumers can book cabs at competitive prices. In this regard, the paper attempts to provide a summary of consumer behaviour when booking cabs, i.e. factors that influence a consumer's behaviour when selecting a cab.

The level at which the aggregators of cab have been working is commendable which can be seen from newspapers, television shows, etc. the main thing is that they provided us with a solution to busy lives where the people had been facing problems since many years. When we try to remember how we used to book a cab, we realise that it brings back memories of dialing to all the cab agencies one after the another, anxiously, on a very urgent day. And then it would require us to wait for hours for the cab to ultimately arrive with no adequate details or information about the time of arrival, as to the credentials of the driver such as his name, his details, and also had problems with the drivers' behavior, exorbitant prices, improper way of billing, and finally, we always used to have a bad and cumbersome experience where the cab drivers mostly took the routes which are long in order to raise their profits. However , with advent of Ola and uber, all such difficulties seems to be resolved.

When compared to other countries, India's taxi transportation industry is somewhat different in nature. The consumer market for taxis is growing by the day, and as a result, the industry is expanding and providing an area of opportunity to many startups to capitalise on its enormous potential. Traditionally, this cab business can be segregated as: pre-aggregator and post-aggregator. The Cab Aggregators primarily dealt with all the big issues, such as cab availability on time, driver behaviour, and security by tracking the vehicles using technology.

Cab Aggregators are aggregators who do not own vehicles and instead coordinate between their stake owners such as drivers, the riders(customers) by the way of technology such as GPS / GPRS (Global Positioning System / General Packet radio service). The taxi industry is made up of both organised and unorganised businesses. Until 2007, almost all of the cab aggregator industry was unorganised, as many of them carried business either individually or in collaboration with other rental businesses.

In India, the taxi industry is divided into two categories: organised and unorganised. The unorganised sector is made up of small travel agencies that operate in smaller areas. This unorganized sector usually owns a less number of cars and provide services to only pre booked customers . Finally, there are agents who do not possess any cars but work in team along with all of the other car owners / agencies / travel agencies so as to gain their part of commission on rides that are booked. Whereas the industry that consists of labeled and branded cars is the organized sector that provides customers with a security features along with comfort and peace of mind. They have a customizes setup, such a proper area to work, skilled employees and staff, a centre for receiving calls on bookings, trained cab drivers, and a cell to handle customer complaints where customers can reach when needed. In general, we can divide the current market into four categories.

- Cab Agencies – Cab agencies are those agencies that possess their own vehicles or coordinate with other agencies who own vehicles. They usually operate in big cities. They also book cars for companies and work on contract basis. However, because of lack of funding, they operate at a lower rate.

- Partnership Model – Under this model, companies work with various other agencies, in order to balance the demand and supply. These companies work on generating leads for all those agencies that work for them or under them. These companies make strategies to make leads and generate demand for the agencies. They generate revenue

through the commissions or the annual contracts. These company's rent the cars on contracts to various hotels to complete their tasks.

- Ownership Model – as the name suggests, companies under this model own the cars completely and then they hire drivers for their cars and manage their drivers with pre specified conditions. The benefit of this model is that the founders will have the independence to carry their business plans, because they do not have restrictions and need not depend on others for their vehicles.

- Portal / Web based Model – these companies use well designed websites to work on lead generation. They don't own any cars and under this model, companies play a lead generator role. They try to capture a large part in market by collaborating with large no. of players and bringing other cab agencies under their umbrella.

- Cab Aggregators – these companies are the companies that work on technology and do not hire cars by themselves as in the other models. With the help of technology, they bridge the gap between drivers and demand for cars. Different applications such as mobile applications are used for same are used for this system. Cab Aggregation Industry is still considered a developing industry due to its rapid growth. The rise of the cab aggregation industry not only solved the problem from the customer's point of view, but also aided drivers in increasing their earnings. Furthermore, it attracted many young entrepreneurs who gradually entered this space, and it has almost become a kind of practise that one in every two young entrepreneurs is considering trying their luck in this space. Using adequate technology and innovative, the two players Ola and Uber have grown tremendously thereby capturing a lion's share in the market. However, as with other firms too, they face a great competition that have reached a certain level of success and are therefore attempting all feasible ways to maintain their status in the market. In addition, people are adopting new ways to assist customers, such as new mobile applications for cab aggregators, which allow a user to find among all available aggregators. Examples of such unified aggregator apps include Oyetaxi and scoot.

As shown in the table below, it was only in year 2000 when private players started entering the industry, but the so-called disruption in the sector did not occur until 2010, with the launch of Ola n Taxi in 2011 and Uber in 2013.

Source: Redseer Consulting presentation, published in Automotive dated April,2015,www.in.com/automotive

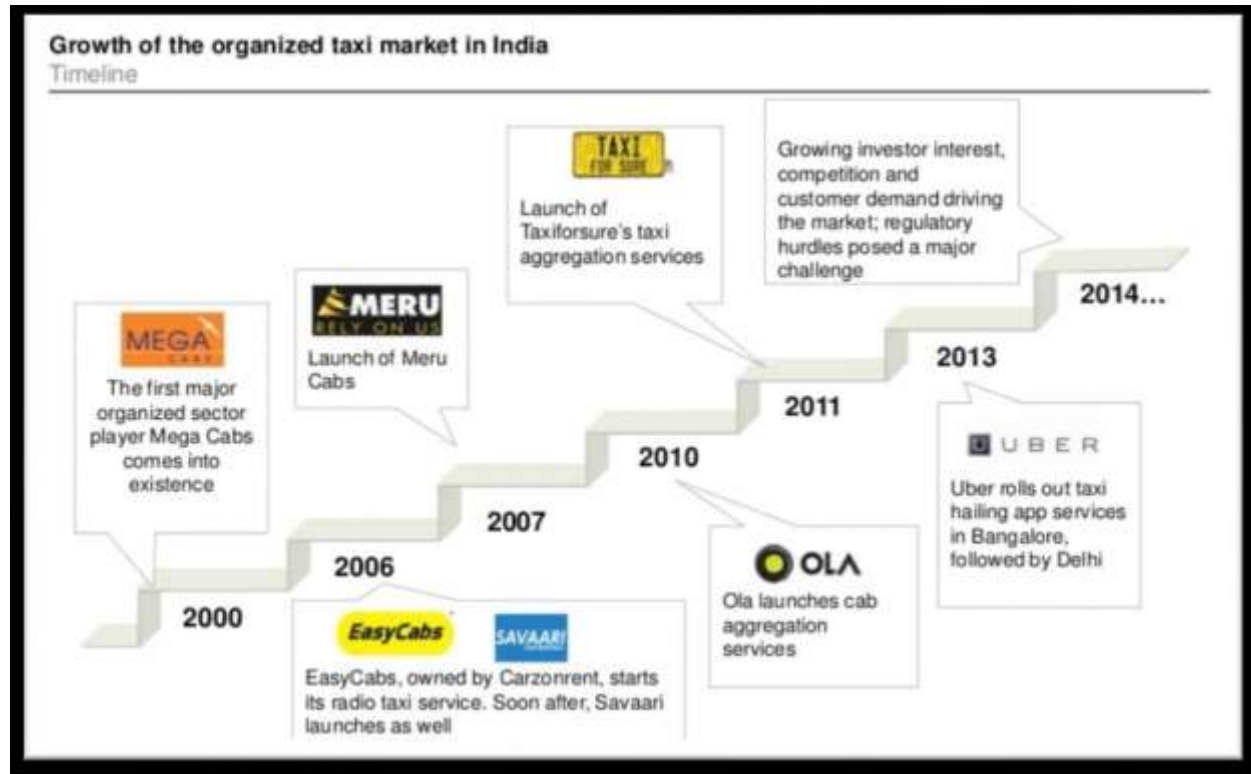


FIGURE 1

Need for the Study

In recent years, there has been an increase in the number of organised cab service providers. There is fierce competition among various operators such as Ola, Radio Cabs, Yellow Cabs, Meru, and Uber, among others. In this regard, understanding consumer behaviour is essential for developing business strategies. Also, to understand the factors which influences their choice in selecting a particular service provider.

CHAPTER 2

Literature Review

A flood of innovations in the realms of mobile Internet and Smartphone technology has resulted in unprecedented changes in the behavioural trajectories of Indian consumers. The same was experienced in the field of existing and potential app-based cab customers as they were ready to pay a premium for hassle-free and comfortable cabs. The customers were now ready to embrace the cab services for point to point travel. Additionally, NCRs fast-paced consumer lifestyle and improved disposable incomes over time can also be attributed for surge in demand for app-centric cab services by a large section of middle class population.

The literatures associated to cab services are as under

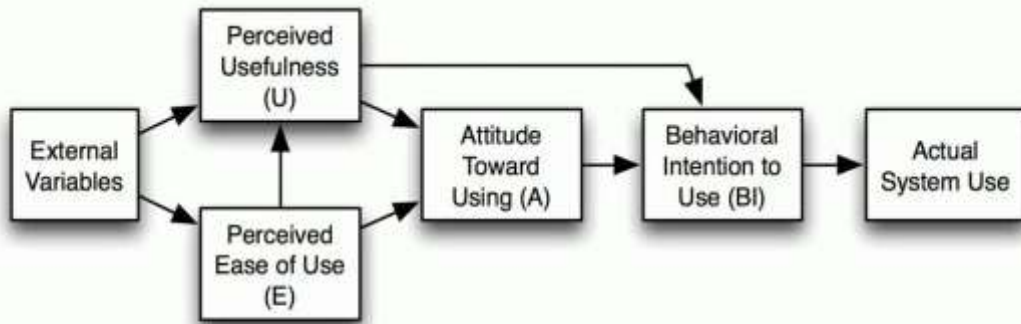
[Shaunak Roy, the IUP Journal of Marketing Management, Vol. XVI, No. 4, 2017]

The TAM (Technology Acceptance Mode) is actually an extension of Fishbein and Ajzen's Theory of Reasoned Action (TRA) (1975). The TAM was superior to the TRA in that it was based on independent variables such as Perceived Usefulness (PU) and Perceived Ease of Use (PEU) as well as dependent variables such as Attitude Towards Usage (ATU) (ATU). Davis (1989) defined PU as the degree to which people perceived a specific system to be useful to them. Davis (1993) further theorized that the actual information system usage was determined by a concept called Behavioral Intention (BI), which was determined jointly by the users' attitude towards the usage of the system and the PU.

Lin et al. (2007) also focused on an application of the TAM, in that they endeavored to corroborate the influence of mobile trust, PU and PEU on wireless mobile data service. Their study brought to light relevant factors such as PEU, perceived playfulness, PU, service fee among other variables as the independent variables which cast a noteworthy impact on the customer adoption of SMS technology.

Perceived ease of Use and perceived usefulness captured customer's attitude towards cab services overall. Behavioral intention and Subjective Norms highlights what/ who can influence a customer's decision-making process.

Technology acceptance model



https://en.wikipedia.org/wiki/File:Technology_Acceptance_Model.png

FIGURE 2

CHAPTER 3

Exploratory Data

Apart from literature review, 11 respondents were selected randomly (under different age group, gender and income group), to get factors influencing their choice.

Respondent Profile:

Respondents	Age group	Gender	Income (Approx.)
Respondent :1	18-35	F	70,000 INR / Month
Respondent :2	18-35	M	2,00,000 INR / Month
Respondent :3	18-35	M	60,000 INR / Month
Respondent :4	18-35	F	1,00,000 INR / Month
Respondent :5	18-35	M	1,00,000 INR / Month
Respondent :6	36-45	M	2,00,000 INR / Month
Respondent :7	18-35	F	90,000 INR / Month

Respondent :8	46-60	F	NIL
Respondent :9	46-60	F	NIL
Respondent :10	46-60	M	2,00,000 INR / Month
Respondent :11	60 above	M	50,000 INR / Month

Respondent Response

S.no.	Questions	Response	Gender	Response
1	How many times per week you use cab services	Respondent 1	F	Daily
		Respondent 2	M	1-3 times
		Respondent 3	M	1-3 times
		Respondent 4	F	1-3 times
		Respondent 5	M	Daily
		Respondent 6	M	1-3 times
		Respondent 7	F	7-8 times
		Respondent 8	F	7-8 times
		Respondent 9	F	4-7 times
		Respondent 10	M	Daily
		Respondent 11	M	Daily
3	Preferred service provider ?	Respondent 1	F	Uber
		Respondent 2	M	Ola
		Respondent 3	M	Ola
		Respondent 4	F	Ola
		Respondent 5	M	Uber
		Respondent 6	M	Uber
		Respondent 7	F	Ola
		Respondent 8	F	Uber
		Respondent 9	F	Uber; sometimes Govt. approved for NCR towns only
		Respondent 10	M	Ola
		Respondent 11	M	Ola, sometimes Easy cabs or meru from airport
4	Important Mobile app feature	Respondent 1	F	Drop and pick up easy to locate, SOS button
		Respondent 2	M	Multi payment option

		Respondent 3	M	Intuitive design and multi-platform
		Respondent 4	F	Drop and pick up at exact location, feedback
		Respondent 5	M	Fast with offline option
		Respondent 6	M	Fast and easy
		Respondent 7	F	Easy to use app, self-telling next step
		Respondent 8	F	Payment option, refund option
		Respondent 9	F	Bill in app and hard copy, correct route
		Respondent 10	M	More easy to use app screen, feedback and refund
		Respondent 11	M	Easy to use app, payment option in cash
5	If you are given discount coupon of Rs.100, would you intentionally use it? / How often do you use cab services without any discount?	Respondent 1	F	No
		Respondent 2	M	No
		Respondent 3	M	No
		Respondent 4	F	No
		Respondent 5	M	Yes
		Respondent 6	M	No
		Respondent 7	F	Yes
		Respondent 8	F	Yes
		Respondent 9	F	Yes
		Respondent 10	M	No
		Respondent 11	M	No
6	For what purpose do you use cab services?	Respondent 1	M	Both
		Respondent 2	F	Both
		Respondent 3	M	Business
		Respondent 4	F	Both
		Respondent 5	F	Both
		Respondent 6	M	Both
		Respondent 7	M	Leisure
		Respondent 8	F	Leisure
		Respondent 9	F	Both

		Respondent 10	M	Business
		Respondent 11	M	Both
7	Factors to consider during trip.	Respondent 1	F	Wifi, mobile charging point, CCTV camera
		Respondent 2	M	AC working, TV, Wifi
		Respondent 3	M	comfort, Wifi
		Respondent 4	F	Safety options, driver professionalism, customer care easily accessible
		Respondent 5	M	AC working, no break down
		Respondent 6	M	correct route, option to change route and destination
		Respondent 7	F	Normal driving, trustworthy
		Respondent 8	F	Clean, security measure
		Respondent 9	F	Safe driving, educated
		Respondent 10	M	Cleanliness, no rude behavior, cleanliness
		Respondent 11	M	friendliness, helpful, comfortable
8	Do you feel safe while travelling in a cab?	Respondent 1	F	Sometimes, During day
		Respondent 2	M	Yes
		Respondent 3	M	Yes, automatic real time tracking
		Respondent 4	F	No; SOS button, emergency procedure
		Respondent 5	M	Yes
		Respondent 6	M	Yes
		Respondent 7	F	No, during day only, female drivers
		Respondent 8	F	Yes, emergency number, SOS
		Respondent 9	F	No, emergency number, SOS
		Respondent 10	M	Yes
		Respondent 11	M	Yes
9	Should the cab services offer Flat tariff?	Respondent 1	F	Yes, no waiting time charge
		Respondent 2	M	Yes; no surcharge, no waiting time charge
		Respondent 3	M	Yes; no base fare

		Respondent 4	F	Yes; no base fare
		Respondent 5	M	No; per minute only
		Respondent 6	M	Yes
		Respondent 7	F	No; per km
		Respondent 8	F	No; no surge charge and base fare
		Respondent 9	F	No; per km
		Respondent 10	M	Yes
		Respondent 11	M	Yes
10	When are you willing to pay surcharge?	Respondent 1	F	Medical or official emergency/Bad weather/late night
		Respondent 2	M	Medical or official emergency
		Respondent 3	M	Medical or official emergency/Avoid parking
		Respondent 4	F	Medical or official emergency/Avoid parking/Airports/railway stations
		Respondent 5	M	Medical or official emergency/Social gathering
		Respondent 6	M	Medical or official emergency/Avoid parking/Airports/railway stations
		Respondent 7	F	Medical or official emergency/ Bad weather
		Respondent 8	F	Late night/ avoid parking
		Respondent 9	F	Avoid parking/social gathering
		Respondent 10	M	Medical or official emergency
		Respondent 11	M	Bad weather/ medical or official emergency
11	Important factor to choose service	Respondent 1	F	Reliability, offered plans, car types
		Respondent 2	M	Connectivity, 24x7 availability, all location
		Respondent 3	M	connectivity, 24x7 availability, all location

		Respondent 4	F	Real time tracking, security, no hidden charges
		Respondent 5	M	Low waiting time, car types
		Respondent 6	M	Credibility, car types, no hidden charges
		Respondent 7	F	Ease of use, security, right estimate time and money
		Respondent 8	F	Ease of use, security tracking
		Respondent 9	F	Low cost plans, easy to locate driver
		Respondent 10	M	Offered plan, credibility, trustworthy, low cost
		Respondent 11	M	Waiting time, reliability, right estimate time and money
12	I will change my preferred service	Respondent 1	F	Recommendations/Social network/ news
		Respondent 2	M	Discounts/Promotional schemes /Social trend
		Respondent 3	M	Discounts/Promotional schemes
		Respondent 4	F	Recommendation/ Safety
		Respondent 5	M	Cheap price, social media and trend
		Respondent 6	M	Availability, social network
		Respondent 7	F	Recommendations/Discounts and promotional schemes
		Respondent 8	F	Discounts/ promotional schemes
		Respondent 9	F	Availability, safety
		Respondent 10	M	will not change
		Respondent 11	M	will not change

CHAPTER 4

RESEARCH FRAMEWORK

Marketing Mix 7Ps

Marketers and businesses today use Marketing Mix as a tool to help determine a product or brand's offering. Since their inception by E. Jerome McCarthy in 1960, the four Ps have been associated with the Marketing Mix. So I have tried to study the relationship between marketing mix, perceived security features and consumer behavior factors towards choosing a particular service provider.

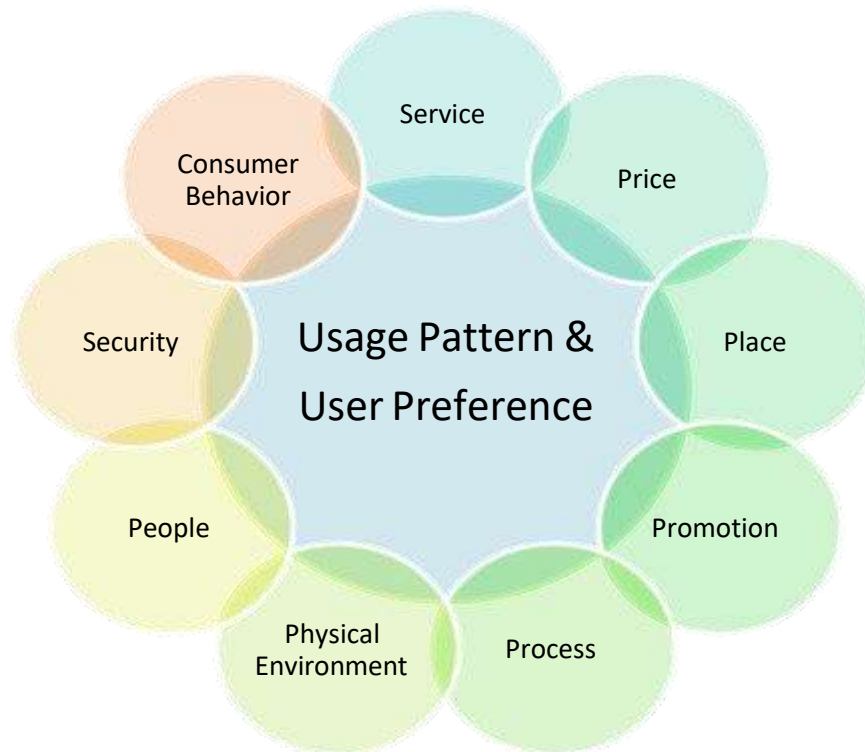


FIGURE 3

Original 4Ps:

Product: the product is the one that is offered by company and should be as per the consumers expectations and should satisfy his/her needs.

Place: The product should be available at target market or a place from where it is feasible for the consumer to get the product. It may be online as e commerce is increasing at a fast pace nowadays.

Price: The price represents the value of money that the consumers pays for it. The price of the product offered by company should be pocket friendly such that it is possible for consumer to avail the product and services.

Promotion: Advertising, public relations, sales promotion are the various techniques used by companies to promote their offerings. The companies rely on various techniques to promote their product. This helps in increasing profits for companies.

Consumer Behavior & Brand Preference

Consumer behaviour, according to Kuester, Sabine (2012), is the study of individuals so as to identify what all factors affect their level of satisfaction when they use products or avail services.

Consumer behaviour incorporates aspects of psychology, sociology, social anthropology, marketing, and economics. It assists businesspeople in understanding buyer decision-making processes, both individually and in groups, such as how emotions influence purchasing behaviour. It incorporates many sub factors such as demographics, psychology, economic related, geographical so as to understand customers need and what they actually demand out of the product. They also assess the impact of outsiders such as friends or society or external influences that affects an individual's choice.

Brand & Brand Awareness:

In the eyes of the customer, brand is an integral component that demonstrates the worth of products or offerings by company. Perceptions represent a company, product, or service; additionally, they are the essence or promise of what will be delivered or experienced.

A brand can be anything like any name, term some sort of logo or could be even in form of audios or jingles. Brands can distinguish themselves from competitors by identifying the image and uniqueness of their products. It also has a level of trustworthiness, quality, and satisfaction.

The strength of a brand's presence in the consumer's mind is referred to as brand awareness. Brand awareness can provide a marketer with a slew of competitive advantages. By influencing the establishment and strength of brand image, brand awareness can influence consumer loyalty and decision making.

Brand Loyalty:

Being loyal means adhering to one particular brand and not using any other brand in that category, even if the product is superior to the product you select. Loyalty gives firms benefits because it allows them to compete at lower prices and develop commodities better when they have loyal customers. The loyalty towards brand is useful for a variety of reasons, including lowering production costs because of high sales volume, less expenditure on promotions and advertising, charging a higher price to increase profit margins, and word of mouth from loyal customers. It is critical to have loyal customers; therefore, the company must highlight the advantages of its product over competitors' products.

The figure below is of Loyalty pyramid by David A. Aaker

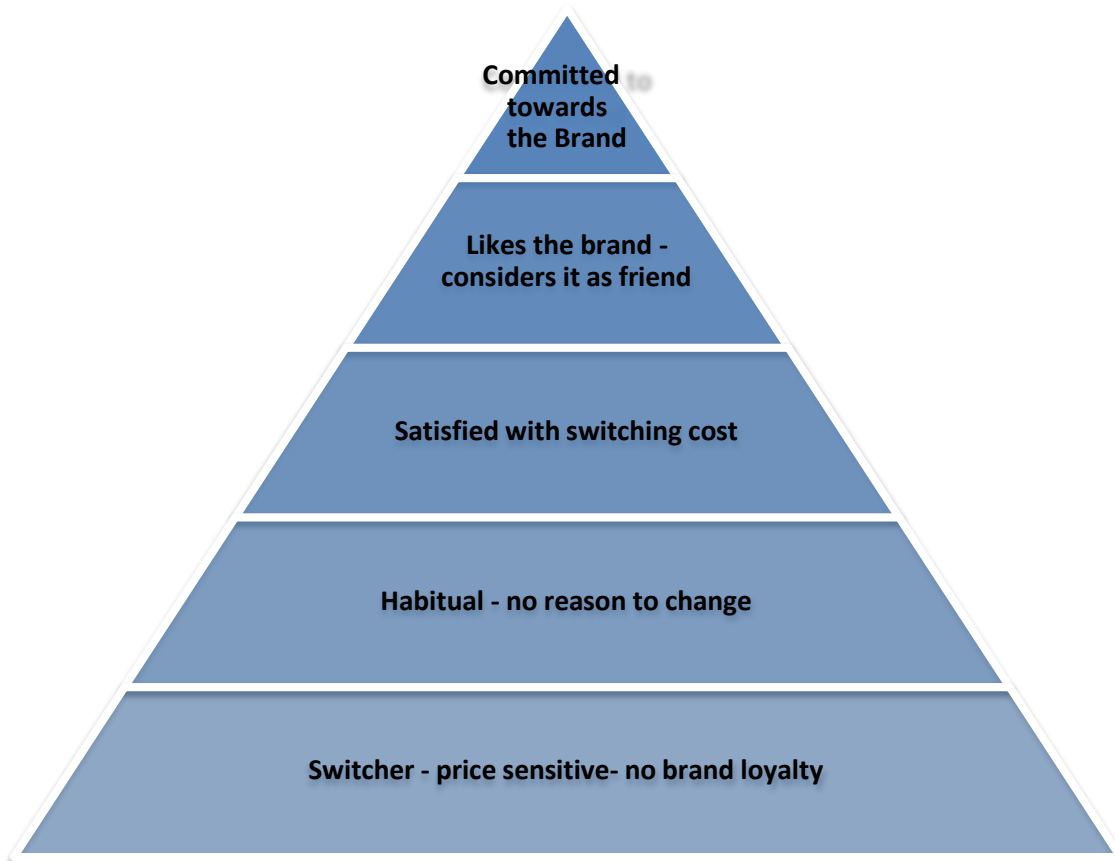


FIGURE 4

CHAPTER 5

(i) Research Objectives

The objective of this research is:

To study consumer behaviors influencing choices while booking an app based cab.

(ii) Research Design

Following methodology will be used to gather data

Exploratory

- Self-Introspection
- Literature Review
 - Google,
 - research papers,
 - reports
- Qualitative analysis

(iii) Scale

Independent Variables will be measured on 5-point Likert scale (Non-comparative-Itemized) and the survey will be conducted on urban population.

(iv) Method of Data Collection

Data will be collected through a detailed questionnaire shared online. Questionnaire attached as Appendix I for the reference.

CHAPTER 6

Hypothesis

Hypothesis 1- The product service criteria includes reliability, credibility, connectivity, etc. which may or may not influence the satisfaction of consumer.

Ho: Product Service criteria insignificantly influences overall satisfaction

H1: Product Service criteria significantly influences overall satisfaction

Hypothesis 2 – The pricing criteria comprises of base fare, surge price, price km, etc. that may affect satisfaction of consumers significantly or insignificantly

Ho: Pricing criteria insignificantly influences overall satisfaction

H1: Pricing criteria significantly influences overall satisfaction

Hypothesis 3 – this hypothesis includes whether driving skills, professionalism, friendliness and politeness, knowledge and skill, trust and credibility of driver affects the satisfaction of consumer.

Ho: People Driver criteria for cab insignificantly influences overall satisfaction

H1: People Driver criteria for cab significantly influences overall satisfaction

Hypothesis 4- This hypothesis tests whether the place of booking criteria such as availability in business area, availability in residential area, etc. does not does not affects the satisfaction of consumers.

Ho: Place of booking criteria insignificantly influences Overall Satisfaction

H1: At least one of Place criteria significantly influences Overall Satisfaction

Hypothesis 5 –The process of booking criteria includes ease to use app, responsiveness, and whether consumers find it easy to book a time or is it time consuming and difficult to book.

Ho: Process of booking criteria insignificantly influences Overall Satisfaction

H1: At least one of Process of Booking criteria significantly influences Overall Satisfaction

Hypothesis 6- This hypothesis tests the promotion criteria of companies such as discounts, monthly pass, etc. which does or does not affects the satisfaction of consumers.

Ho: Promotion criteria insignificantly influences Overall Satisfaction

H1: Promotion criteria significantly influences Overall Satisfaction

Hypothesis 7 – This tests the impact security features includes SOS, emergency procedures, safety of women, etc.

Ho: Security features for cab (SOS, emergency procedures, etc.) significantly influences Overall Satisfaction

H1: Security features for cab (SOS, emergency procedures, etc.) insignificantly influences Overall Satisfaction

Sampling Design

- Target population – individuals of 18 years of age and above
- Sampling Frame- Friends, colleagues and relatives
- Sample unit – App based cab user

Z: This is the confidence level which will be used in our calculation for sample size. This has been taken arbitrarily taken it at 95% based on convention. It denotes that there is 0.05 probability of the true population parameters being incorrectly estimated.

II: This is the ratio of total number of motor cabs to the total number of motor cars registered. This is proportion of app-based cab amongst all motor cab in Delhi.

e: This is the magnitude of error, or the confidence interval. This indicates how precise the estimate must be. It indicates a certain precision level.

Sample Size

$$n = Z^2(\pi)(\pi-1)/e^2$$

Where,

Z= confidence level standard error units for confidence interval of 95%

e= maximum allowance for error (2.5%)

Π = proportion of app-based cab amongst all motor cab in Delhi (Source: Delhi Transport Department)

π = motor cab/motor car

$$= 11445/3044883$$

$$= 0.0366$$

$$n = [(1.96)^2(0.0366)(0.963)]/(.025)^2 = 216.73$$

$n \sim 220$

Thus, minimum valid responses that are required for study is 220.

The split for different age group is shown below:

Age Group	Total		Male		Female	
	Percentage	Number	Number	percentage	Number	Percentage
18- 35	53%	116	63	54%	53	46%
36- 45	20%	45	24	53%	21	47%
46 -60	18%	40	21	53%	19	48%
61 and above	9%	19	10	53%	9	47%
	100%	220	118	54%	102	46%

FIGURE 5

CHAPTER 7

ANALYSIS AND INTERPRETATION

(i) Determining Influential Factor

In this research it has been assumed that 7Ps of marketing along with Security, social behavior affects consumer preference in choosing a app based cab service provider.

Through this research, it will be highlighted which factors affect positively and which affects negatively.

(ii) Regression Analysis

Check for Assumption:

1. Check for Dependent Variable Y

1.1. Y is normally distributed and the scale is interval or ratio → Satisfied as 5-Point Likert scale is used to measure overall satisfaction

1.2. Y & X are linearly related

2. Model Built

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.073	.044		92.997	.000		
	Product & Services	.030	.087	.041	.346	.730	.252	3.974
	Price Sensitivity	-.010	.066	-.014	-.158	.875	.445	2.247
	Place of Booking	-.055	.078	-.074	-.701	.484	.315	3.170
	Process of Booking	.166	.071	.224	2.335	.020	.379	2.637
	Effect of Promotions and Discounts	.096	.060	.129	1.586	.114	.526	1.901
	Physical environment or condition of Car	.059	.066	.080	.899	.369	.447	2.236
	Driver Behavior	.076	.078	.103	.973	.331	.315	3.172
	Safety and Security	-.124	.065	-.167	-1.904	.058	.456	2.191

a. Dependent Variable: K1_OverallSatisfaction

$$\text{Overall Satisfaction} = 0.041X_1 - 0.014X_2 - 0.074X_3 + 0.224X_4 + 0.129X_5 + 0.080X_6 + 0.103X_7 - 0.167X_8$$

Process of Booking appears to be most important influencer ($\beta = 0.224$) in the above model.

From the table, Significance (p) = 0.000 Assumed, effective alpha (α) = 0.025

Since, $p < \alpha \rightarrow$ reject H_0 , accept H_1
Therefore, Model significantly explains overall satisfaction

(iii) Significance of Independent variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.073	.044		92.997	.000		
	Product & Services	.030	.087	.041	.346	.730	.252	3.974
	Price Sensitivity	-.010	.066	-.014	-.158	.875	.445	2.247
	Place of Booking	-.055	.078	-.074	-.701	.484	.315	3.170
	Process of Booking	.166	.071	.224	2.335	.020	.379	2.637
	Effect of Promotions and Discounts	.096	.060	.129	1.586	.114	.526	1.901
	Physcal environment or condition of Car	.059	.066	.080	.899	.369	.447	2.236
	Driver Behavior	.076	.078	.103	.973	.331	.315	3.172
	Safety and Security	-.124	.065	-.167	-1.904	.058	.456	2.191

a. Dependent Variable: K1_OverallSatisfaction

Hypothesis can be explained as below:

H₁₀: Product Service criteria (Reliability, Credibility, Connectivity etc) insignificantly influences Overall Satisfaction

H_{1a}: Product Service criteria (Reliability, Credibility, Connectivity) significantly influences Overall Satisfaction

Since, significance (p= 0.730) > $\alpha \rightarrow$ accept H_0 , reject H_1
Therefore, Service insignificantly explains overall satisfaction

H₂₀: Pricing criteria (Base fare, Surge price, price per km) insignificantly influences Overall Satisfaction

H_{2a}: Pricing criteria (Base fare, Surge price, price per km) significantly influences Overall Satisfaction

Since, significance (p= 0.875) > $\alpha \rightarrow$ accept H_0 , reject H_1
Therefore, Price insignificantly explains overall satisfaction

H₃₀: Place of booking criteria (Availability in business area, Availability in residential area, etc) insignificantly influences Overall Satisfaction

H_{3a}: At least one of Place criteria (Availability in business area, Availability in residential area, etc) significantly influences Overall Satisfaction

Since, significance ($p= 0.484$) $> \alpha \rightarrow$ accept H_0 , reject H_1

Therefore, Place of Booking insignificantly explains overall satisfaction

H₄₀: Process of booking criteria (Easy to use App, responsiveness, etc) insignificantly influences Overall Satisfaction

H_{4a}: At least one of Process of Booking criteria (Easy to use App, responsiveness, etc) significantly influences Overall Satisfaction $\beta \neq 0$

Since, significance ($p= 0.020$) $< \alpha \rightarrow$ reject H_0 , accept H_1

Therefore, Process of Booking significantly explains overall satisfaction

H₅₀: Promotion criteria (Discounts, monthly pass, etc) insignificantly influences Overall Satisfaction

H_{5a}: At least one of Friendliness and Politeness, Knowledge and skill, Trust and credibility) significantly influences Overall Satisfaction

Since, significance ($p= 0.114$) $> \alpha \rightarrow$ accept H_0 , reject H_1

Therefore, Promotions insignificantly explains overall satisfaction

H₆₀: Physical environment criteria for cab (cleanliness, car condition, etc) insignificantly influences Overall Satisfaction i.e $\beta = 0$

H_{6a}: Physical environment criteria for cab (cleanliness, car condition, etc) significantly influences Overall Satisfaction $\beta \neq 0$

Since, significance ($p= 0.369$) $> \alpha \rightarrow$ accept H_0 , reject H_1

Therefore, Physical environment insignificantly explains overall satisfaction

H₇₀: People Driver criteria for cab (Driving skill, professionalism, etc) insignificantly influences Overall Satisfaction

H_{7a}: People Driver criteria for cab (Driving skill, professionalism, etc) significantly influences Overall Satisfaction

Since, significance ($p= 0.331$) $> \alpha \rightarrow$ accept H_0 , reject H_1

Therefore, People (i.e Driver) insignificantly explains overall satisfaction

H_{8a}: Security features for cab (SOS, emergency procedures, etc) insignificantly influences Overall Satisfaction

Since, significance ($p= 0.058$) $> \alpha \rightarrow$ accept H_0 , reject H_1

Therefore, Security insignificantly explains overall satisfaction

CHAPTER 8

Customer Usage Pattern & Profile

(i) Demographic Profile of the Respondents

Table 1.a

Age in Years		Gender		Marital status		Occupation	
18-35	58%	Male	55%	Married	55%	Professional/technical	47%
36-45	22%	Female	45%	Unmarried	42%	Sales/Market	15%
46-60	12%			Divorced	3%	Middle management	10%
Above 60	8%					Student	8%
						Homemaker	7%
						Self employed	5%
						Government Employee	5%
						Retired	1%
						Others	1%

The results of the demographic profile of the respondents are presented in the table 1.a and 1.b. A sample of 262 respondents was collected of which 55% were Male and remaining 45% were Females. 80% of the sample was in the age group of 18-45 and remaining 20% were in above 45 years of age. 55% of the Respondents were Married, 42% Unmarried and 3% were Divorced. Professional/Technical, Sales/Market and Middle management formed 47%, 15% and 10% of the sample.

Table 1.b

Educational qualification		Monthly Income	
Graduate	44%	Below 50,000	34%
Post graduate	38%	Between 50,001-1,00,000	32%
High school	10%	Above 2,00,000	19%
Doctorate	6%	Between 1,00,001-1,50,000	10%
Others	2%	Between 1,50,001-2,00,000	4%

As shown in the table 1.b, 44% of the respondents were Graduates, 38% were Post graduates, 10% from High school, 6% Doctorates and remaining 2% fell in the Others category. 34% of the sample fell in the below Rs.50,000 monthly income level, 32% in the monthly income level of Between Rs.50,001-1,00,000, 19% in the monthly income level of Above Rs.2,00,000, 10% in the monthly income level of Between Rs.1,00,001-1,50,000 and remaining 4% in the monthly income level of Between Rs.1,50,001-2,00,000.

(ii) Cluster and segmentation analysis

To conduct the cluster and segmentation analysis we first performed Hierarchical Cluster Analysis to identify groups in the dataset. We identified that the entire sample can be segmented into four cluster. The data in the cluster is uniformly distributed.

Number of Cases in each Cluster		
Cluster	1	74
	2	65
	3	83
	4	40
Valid		262
Missing		0

Further we carried out K-Means Cluster Analysis to find groups which have not been explicitly labeled in the data or to identify unknown groups patterns. As per the K-Means Cluster Analysis, we concluded the following points:

In Cluster 1, Product & Services, Price Sensitivity and Effect of promotions & discounts did not influence the user behavior while Place of booking, Process of Booking, Physical environment or condition of car, Driver Behavior, Safety & security influenced the cab user behavior.

In Cluster 2, Product & Services, Price Sensitivity, Process of Booking, Driver Behavior and Safety & security did not influence the user behavior

In Cluster 3, all the factors including Product & Services, Price Sensitivity, Place of booking, Process of Booking, Effect of Promotions and Discounts, Physical environment or condition of car, Driver Behavior and Safety & Security positively influenced the cab user behavior.

Table 2.1

Initial Cluster Centers

	Cluster			
	1	2	3	4
Product & Services	-1.29198	-.86260	1.48509	-2.98481
Price Sensitivity	-2.86030	-.05420	1.60692	-2.86030
Place of Booking	1.24816	.17712	1.24816	-2.94439
Process of Booking	1.26594	-1.61111	1.26594	-2.97535
Effect of Promotions and Discounts	-1.71689	.92040	1.45292	-2.73387
Physical environment or condition of Car	1.26532	1.26532	1.26532	-2.83813
Driver Behavior	.84115	-2.89422	1.07635	-2.89422
Safety and Security	1.16401	-.00381	1.16401	-2.68771

In Cluster 4, none of the factors influenced the cab user behavior.

The Cluster 3, is the only group which was influenced by all the factors considered in the study. In order to draw some insights, we carried out Cross tabulation analysis.

(iii) Cross Tabulation Analysis

The Cross-Tabulation Analysis' were carried out on the four cluster groups for Age, Gender, Occupation, Income Level, Social trend affect, Social media affect, Free ride and Recommendation.

By combining the data from Table 2.1 and 2.2, it can be observed that user behavior of young population i.e. those in the Age group of 18-35, approximately 23% of the total sample, was most influenced by the factors studied, followed by the people in the age Group 36-45 years of age.

Table 2.2

Age group * Cluster Number of Case Crosstabulation

Count

		Cluster Number of Case				Total
		1	2	3	4	
Age group	18-35	34	28	61	28	151
	36-45	28	13	16	1	58
	46-60	9	14	4	5	32
	Above 60	3	10	2	6	21
Total		74	65	83	40	262

By combining the data from Table 2.1 and 2.2, it can be observed that 18% Female and 14% of the Male user behavior was influenced by the factors.

A2_Gender * Cluster Number of Case Crosstabulation

Count

		Cluster Number of Case				Total
		1	2	3	4	
A2_Gender	Female	29	27	46	16	118
	Male	45	38	37	24	144
Total		74	65	83	40	262

Table 2.3

By combining the data from Table 2.1 and 2.3, it can be observed that user behavior did not any impact on the user pattern of the cab users.

A3_MaritalStatus * Cluster Number of Case Crosstabulation

Count

		Cluster Number of Case				Total
		1	2	3	4	
A3_MaritalStatus	Divorced	2	1	3	3	9
	Married	42	38	46	17	143
	Unmarried	30	26	34	20	110
Total		74	65	83	40	262

Table 2.3

A4_Education ^ Cluster Number of Case Crosstabulation

Count		Cluster Number of Case				Total
		1	2	3	4	
A4_Education	Doctorate	5	5	4	2	16
	Graduate	33	36	29	17	115
	High school	10	2	5	9	26
	Others	4	2	0	0	6
	Post graduate	22	20	45	12	99
Total		74	65	83	40	262

Table 2.4

By combining the data from Table 2.1 and 2.4, it can be observed that 16% Professional/technical was the most significant class of occupation whose user behavior was influenced by the factors.

A5_Occupation ^ Cluster Number of Case Crosstabulation

Count		Cluster Number of Case				Total
		1	2	3	4	
A5_Occupation	Government Employee	3	2	5	3	13
	Homemaker	9	3	4	3	19
	Middle management	7	5	12	3	27
	Others	0	0	3	0	3
	Professional/technical	30	34	42	17	123
	Retired	0	1	1	1	3
	Sales/Market	11	13	8	8	40
	Self employed	4	4	4	2	14
	Student	10	3	4	3	20
	Total		74	65	83	40

Table 2.4

By combining the data from Table 2.1 and 2.5, it can be observed that user behavior of 13% of the people in the monthly income group of below Rs,50,000 were influenced by the factors.

A6_MonthlyIncome ^ Cluster Number of Case Crosstabulation

Count		Cluster Number of Case				Total
		1	2	3	4	
A6_MonthlyIncome	Below 50,000	17	20	33	20	90
	Above 2,00,000	20	6	20	4	50
	Between 1,00,001-1,50,000	9	7	7	3	26
	Between 1,50,001-2,00,000	5	4	2	0	11
	Between 50,001-1,00,000	23	28	21	13	85
Total		74	65	83	40	262

Table 2.5

By combining the data from Table 2.1 and 2.6, it can be observed that user behavior of 12% sample with no cars and 13% of the sample with one car was influenced by the factors. It can be also drawn from the data that sample who owned their own cars even their user behavior was influenced by the factors.

Table 2.6

A7_NoOfcars ^ Cluster Number of Case Crosstabulation

Count		Cluster Number of Case				Total
		1	2	3	4	
A7_NoOfcars	0	24	14	32	11	81
	1	31	36	35	20	122
	2	13	13	13	7	46
	3 or more	6	2	3	2	13
Total		74	65	83	40	262

From 2.7, it can be observed that 50% the total sample use the cabs for both business and leisure purpose.

Table 2.7

B1_PrimaryPurpose ^ Cluster Number of Case Crosstabulation

Count		Cluster Number of Case				Total
		1	2	3	4	
B1_PrimaryPurpose	Both	39	27	52	14	132
	Business	14	19	15	14	62
	Leisure	21	19	16	12	68
Total		74	65	83	40	262

From 2.7, it can be observed that as per the sample 38% of the total cabs usage decisions are self-affected, followed at 26% by Family and 21% by Friends.

B4_AffectYourDecision ^ Cluster Number of Case Crosstabulation

Count

		Cluster Number of Case				Total
		1	2	3	4	
B4_AffectYourDecision	Colleagues	11	8	5	1	25
	Family	14	19	24	12	69
	Friends	15	18	10	13	56
	Myself	31	13	43	13	100
	News channel	3	7	1	1	12
Total		74	65	83	40	262

Table 2.7

From 2.8, it can be observed that as per the sample 51% of the total cabs users believe that Social trend affect their user behavior and 49% cab users believe that they are not affected by the social trend.

B5_SocialTrendAffect ^ Cluster Number of Case Crosstabulation

Count

		Cluster Number of Case				Total
		1	2	3	4	
B5_SocialTrendAffect	No	33	34	43	18	128
	Yes	41	31	40	22	134
Total		74	65	83	40	262

Table 2.8

From 2.8, it can be observed that as per the sample 55% of the total cabs users believe that Social Media affect their user behavior and 45% cab users believe that social media does not impact their user behavior.

From 2.9, it can be observed that 52% users preferred to use Uber as the preferred choice of cab service in case a free ride was offered followed by Ola at 38% while there were 4% of users who said that they will not use free ride.

Table 2.9

B7_FreeRide ^ Cluster Number of Case Crosstabulation

Count

		Cluster Number of Case				Total
		1	2	3	4	
B7_FreeRide	Easy cabs	3	1	2	0	6
	I will not use	4	1	5	1	11
	Meru	3	1	2	1	7
	ola	27	30	25	19	101
	Uber	37	32	49	19	137
Total		74	65	83	40	262

CHAPTER 9

Discussion

As per the research question- which factor influences the selection of app based service provider, it was observed that Process of booking affected consumer choice most significantly.

Interestingly, this also answered our second question – is ease booking most important influencer amongst the independent variables and the answer was affirmative.

However, the regression model efficiency was only explained 8.7%, even though individual independent variables influenced dependent variable significantly. This indicates that there is still scope of more detailed analysis.

With respect to Consumer behavior, user in the age group between 18-35 were most influenced by the factors under considerations in this study, irrespective of gender.

It was also observed that users were most influenced by their own thought process rather than family and friends. Overall, Social Trend influenced their choices marginally while Social media considerably affected their decision making in choosing a particular cab aggregator.

Recommendation

- ✓ Ease of booking is still the most influential criteria; hence the cab aggregators must focus on enhancing user interface, app response, multi modal payment options, feedback etc.
- ✓ The company should target the younger generation and try to increase penetration.
- ✓ Since younger generation is most influenced by their own mindset, it becomes imperative to directly engage with them and preferably through social media
- ✓ There is still scope of customizing plans and product offerings to attract/retain customers from the age group of 36-45 & 46-60.

Appendix : Questionnaire

There are three parts of the questionnaire

- **Part A:** Demographic - The first part consists of general information.
- **Part B:** Consumer Usage Pattern - Second part deals with consumer behavior and choices based on income, lifestyle, recommendation, etc.
- **Part C:** Marketing Mix (7Ps) - information of marketing factor influencing consumer brand choices.

Part A: Demographic

QA1. Age

- a. 18-35
- b. 36-45
- c. c 46-60
- d. Above 60

QA2. Gender:

- a. Male
- b. Female

QA3. Marital status

- a. Married
- b. Unmarried
- c. Divorced

QA4. Educational qualification

- a. High school
- b. Graduate
- c. Post graduate
- d. Doctorate
- e. Others

QA4. Occupation

- a. Homemaker
- b. Professional/technical

- c. Sales/Marketing
- d. Middle management
- e. Government Employee
- f. Self employed
- g. Student
- h. Retired
- i. Others

QA5. Monthly income (INR)

- a. Below 49,000
- b. Between 50,000-99,000
- c. Between 1,00,00-1,49,000
- d. Between 1,50,000-2,00,000
- e. Above 2,00,000
- f.

QA6. The no. of cars that you own?

- a. 0
- b. 1
- c. 2
- d. 3 or more

Part B: In this section, general cab usage pattern will be observed

QB1. Primary purpose.

- a) Business
- b) Leisure
- c) Both

QB2. How many times per week

- a. daily
- b. 1-3
- c. 4-7
- d. 7-10
- e. More than 10

QB3. How much do you on approximately spend on cab services in a week (in INR)?

- a. Less than 500
- b. 500-1,500
- c. 1,501-2,500
- d. Above 2,500

QB4. Who can affect your cab choice?

- a. Myself
- b. Family
- c. Friends
- d. Colleagues
- e. News channel

QB5. Are you affected by social trend about brand choices while booking taxi on mobile application?

- a. Yes
- b. No

QB6. Does the social network affect your brand choices of taxi booking mobile application?

- a. Yes
- b. No

QB7. If a free ride were offered to you, which service provider will you choose?

- a. Ola
- b. Uber
- c. Meru
- d. Easy cabs
- e. Government approved stands
- f. I will not use

QB8. Based on your experience would you recommend your preferred cab service provider to a friend?

- a. Yes, I'll recommend it
- b. No, I'll not recommend it

c. Offer no opinion either way

QB9. I check various cab services rates while booking a cab?

- a. Strongly agree
- b. Somewhat Agree
- c. Neither agree nor disagree
- d. Somewhat disagree
- e. Strongly disagree

QB13. Are you willing to pay surge pricing for the below situations?

- a. Medical emergency
- b. To avoid parking issues
- c. Airport / Railway Stations
- d. Social gatherings / parties
- e. Bad weather
- f. f. Late night (10pm to 6am)

C: Product/Service:

Rate each factor on the basis of importance to you on a scale of 1 to 5, where 1= least important and 5= most important.

C Product /Service 1 2 3 4 5

	1	2	3	4	5
Credibility					
Real Time					

Tracking					
Waiting time					
Car types available					
Connectivity					
Security					
Offered Plans					
Reliability					

D Process of Booking

D Process (Ease of Use) 1 2 3 4 5

Easy to use App	1	2	3	4	5
Mobile app responsiveness					

(fast loading)					
drop / pick up convenience					
Option to choose car type					
Option to change route/destination					
Multi payment option (credit card, COD, Paytm)					
Feedback					

E Promotion

Ride discount	1	2	3	4	5
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Monthly Discount Pass					
Cross platform discount					
Loyalty promotional points					

F: Physical environment

Cleanliness	1	2	3	4	5
Car condition					
Amenities					
Overall comfort					

G. Overall Satisfaction Level with App based taxi. On a scale of 1 to 5 where 1= least satisfied and 5= extremely satisfied. (Select any one)

1	2	3	4	5

ANNEXURE

LIST OF FIGURES

FIGURE1- Growth of organized taxi market in India

FIGURE 2- Technology Acceptance Model

FIGURE 3- Usage preference and Usage pattern

FIGURE 4- Loyalty Pyramid by David A Aker

FIGURE 5- Split for different age groups

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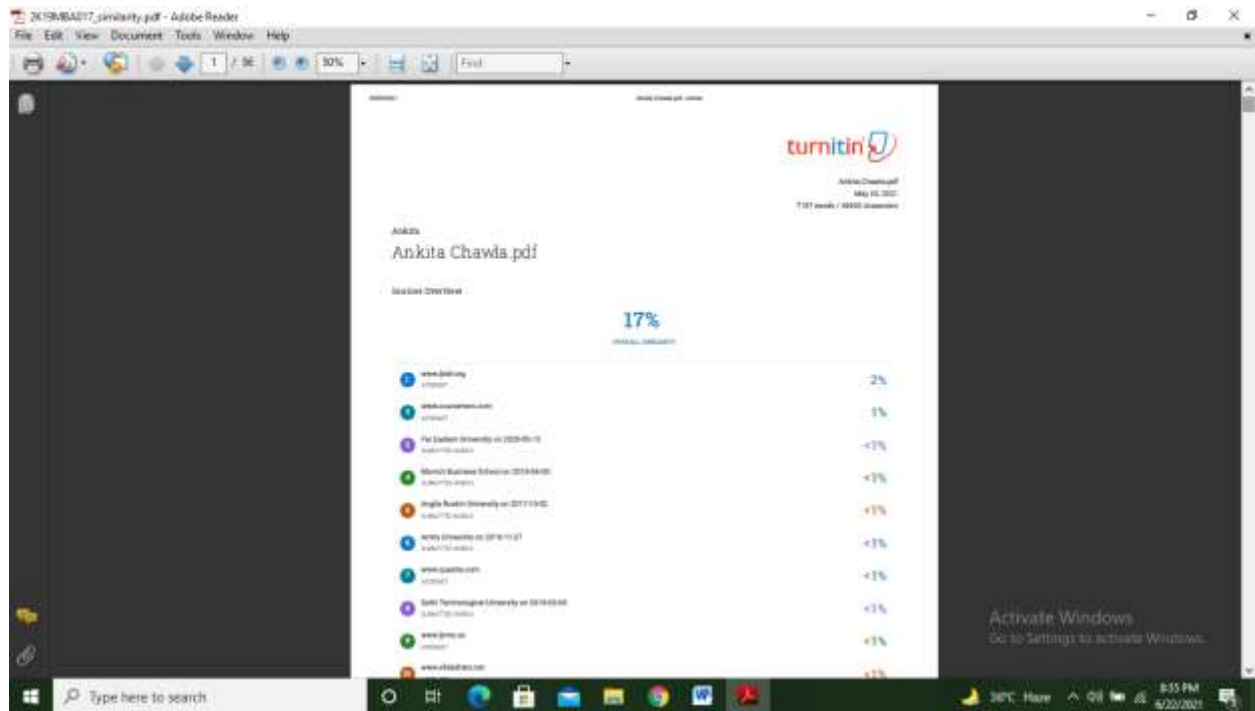
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PLAG REPORT



APPROVAL MAIL

