Customer's Preference towards buying Economical Cars in Mumbai Region

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Abstract

Automobile industry in India has grown significantly in the last decade with its various passenger-car models, the automotive industry is achieving new heights. This research paper focused on the customer's preference towards buying economical cars in Mumbai region & the study includes all the features which are required to decide on buying a car such as interior, exterior, pick up, etc. The researcher collected data from 100 respondents. A structured questionnaire was used to collect data regarding the features and types of the car. Chi square test were run to find out the relation of the age group with the type of car they prefer and between gender and the type of car they prefer. Factor analysis was used to find out the most important factors which leads to purchase decision.

Key Words: Consumer Preference; Automobile industry; Buying decision: Chi square test; factor analysis.

Introduction: Post Liberalization automobile industry in India has grown significantly. With its various passenger-car models, the automotive industry is achieving new heights.it is currently the third largest market of the world in terms of volumes. The demand for passenger cars in India is increasing over the last two decades as the household income of middle-class Indian is growing. Global automotive players are taking interest in Indian Market like never. Indian players are also making their presence felt by giving tough competition to the Multinational companies by launching modern and creative models.

Consumer buying behavior for cars a *Literature review*

Indian consumers plan a purchase of car after a lot of deliberations' a study shows that 70 percent of the consumer decide on the model even before visiting a dealer. This shows the customers try to gather as much information online as possible.

Kotler (1994) Consumer behavior is the study of how people buy, what they buy, when they buy and why they buy. Solomon et al. (1995) Consumer is the study "of the processes involved when individuals or groups select, purchase, use, or dispose of products, services, ideas, or experiences to satisfy needs and desires"

"Consumer behavior is the actions and the decision processes of people who purchase goods and services for personal consumption" – according to Engel, Blackwell, and Mansard,
Situational factors impacting consumer behaviour may include location, environment, timing and even weather conditions (Hoyer et al., 2012)

Pasricha (2007) states that customers no longer reply to mass marketplace requests; they have more specific tastes, and they are looking for a more specific style. When faced with similar products they may select the brand towards which they have an emotional bonding, and which accomplishes their emotional needs.

Gupta and Pal (2010) customers are extremely involved in buying when it is luxurious, bought rarely, risky and extremely expensive. Typically, the consumer does not know much about the product group and has much to learn.

Cuza (2011) in her research article on issues prompting passenger car customer behaviour and their usage in the ecological community policy concluded that the car is a vital symbol of status to the customer and does not stand for a solitary norm of fulfilment for conveyance need.
n the next stage, consumer searches information related to desired product or service (Schiffman and Kanuk, 2007). Information search process can be internal and external. While internal search refers to the process where

consumers rely on their personal experiences and believes, external search involves wide search of information which includes addressing the media and advertising or feedbacks from other people (Rose and Samouel, 2009).

Once the relevant information about the product or service is obtained the next stage involves analysing the alternatives. Kotler and Keller (2005) consider this stage as one of the important stages as the consumer considers all the types and alternatives taking into account the factors such as size, quality and also price.

Backhaus et al (2007) suggested that purchase decision is one of the important stages as this stage refers to occurrence of transaction. In other words, once the consumer recognized the need, searched for relevant information and considered the alternatives he/she makes decision whether or not to make the decision. Purchasing decision can further be divided into planned purchase, partially purchase or impulse purchase as stated by Kacen (2002) which will be discussed further in detail in the next chapters.

"The study deals in to find out the preference of the customers while purchasing a car. The study noticed that the customers gives more important to mileage, availability of spares, look and style for buying a car (R.Velmurugan & V. Mathankumar, 2015).

The research paper speaks about the change in the market. The current scenario of market is now of need-based marketing from product-based marketing. Thus, the makers have to study the customer's behavior and perception towards the automobile, and which will lead in developing good marketing strategies to work on it. The study was conducted in Chennai which is one of the growing cities for automobile industry. The study consists of total 350 interviews out of which 327 were collected and the interview deals with the perception of this interviewer regarding the automobiles. The research about understands the most important features that the makers should keep in mind to attract the potential customers. The customer needs and wants are very crucial in the automobile industry (K.Vidyavathi 2012). The super luxury cars performances are not as same as they are in the other parts of the country compared to India. The main reason behind this is various rules and regulation of the regulatory body which acts as a barrier from the outside competition. The Indian car market thought that the super luxury car is unaffordable, but now the trend has changed as there is demand in this and the Indian market is expected to be 3rd largest market in the world by 2030. The main reasons behind growing of car industry are due to increase in the GDP rate, high ownership capacity, massive population and per capita

income. The size of luxury car market is growing and will tend to increase in coming years. The top brands for luxury cars in India are Audi, BMW, Bentley, Lamborghini, Mercedes, Porsche and Rolls Royce (Ribhu et al., 2009).

In this study it states that the car segment in the automobile industries have a huge potential and is likely to be the fastest growing segment in the world. With the increase in the number of models in past years the segment has seen an exponential progress in the sector. Nowadays the demand for the car is growing and every family wants to have at least a car in their house and the social- economic factors like age , family size, occupation, income, education and martial status affect the purchase decision. Whether it is a local car brand or global car brand the customers have a list of features for their car such as high fuel efficiency, durability, comfort, good quality, safety and technology. Thus the study results that the makers should work on innovation considering the customers' needs and wants and their social- economic figures

 (B. Nirmaladevi & A.Sriram, 2014). The research tells that car company are now becoming customer centric and are determine towards satisfying the customers' needs as the makers have understood that the current market is of satisfying the needs of the customers. The choice of the customers are very flexible and change with time so it makes difficult for the manufacturer to satisfy everyone's needs and want and that's why the manufactures are in dilemma and how to proceed further. This problem is faced by the Indian automobile industry and the big players like Hyundai and Maruti Suzuki are concerned with satisfying the expectation and wants of the customers. The study is about the elements that lead to expectations, needs and wants of the customers. The objective of this study is to notice opinion and preference of Hyundai and Maruti consumers with respect to fuel efficiency, after sales service resale value and also the brand preference among these two brands. The research results that customer opt for Maruti Suzuki on factors like after sales service, fuel efficiency, availability of spare parts and resale value and customers opt for Hyundai for technology, comfort, exterior, convenience etc
 (M.A.Lokhande & Vishal S.Rana, 2015).

leading carmakers including Maruti Suzuki India Ltd, Hyundai Motor India Ltd, Mahindra & Mahindra Ltd, Tata Motors Ltd and others have launched their own online platforms to transact digitally. This includes Hyundai's 'Click to Buy' program, Honda Car India's 'Honda from Home', Tata Motors' 'Click to Drive', M&M's 'Own Online', among several others.

OBJECTIVES of the study.

To study the shift customer's buying behavior towards cars during last one year.

To identify the factors leading to purchase of cars.

To study various features consumers, look for in an automobile brand.

Research Design. *A survey was conducted through a structured questionnaire among 100 car users in the Mumbai suburban region to understand the buying behavior. Hypothesis were framed and tested using Chi square test. The data was further analysed using chi square test and factor analysis.*

HYPOTHESIS TESTING

Hypothesis

Ho: There is no link between gender and the type of car people prefer to buy.

Ha : There is a link between gender and the type of car people prefer to buy.

Table 1: Observed Table:

Count of What is your gender Row Labels	Compact SUV	Hatchback	Sedan	SUV	Grand Total
Female	7	7	18	15	47
Male	15	9	16	13	53
Grand Total	22	16	34	28	100

Expected Table:

Count of What is your gender Row Labels	Column Labels Compact SUV	Hatchback	Sedan	SUV
Female	10.34	7.52	15.98	13.16
Male	11.66	8.48	18.02	14.84

Alpha = 0.05

P – VALUE = 0.38086017

Since,

P-VALUE   > 0.05

i.e. 0.38086017 > 0.05

Accept the Null Hypothesis

Result: There is no link between gender and preference towards a car as the P-value is greater than 0.05.

Ho: There is no link between age group and the type of car people prefer to buy.

H1: There is a link between age group and the type of car people prefer to buy.

Table No. 2

Observed Table:

Count of You fall under the age group ? Column Labels ▾					
Row Labels ▾	Compact SUV	Hatchback	Sedan	SUV	Grand Total
18-25	5	4	15	14	38
25.1-40	6	2	11	8	27
40.1-55	8	7	4	3	22
55.1 & above	3	3	4	3	13
Grand Total	22	16	34	28	100

Expected Table:

Count of You fall under the age group ?	Column Labels			
Row Labels	Compact SUV	Hatchback	Sedan	SUV
18-25	8.36	6.08	12.92	10.64
25.1-40	5.94	4.32	9.18	7.56
40.1-55	4.84	3.52	7.48	6.16
55.1 & above	2.86	2.08	4.42	3.64

Alpha = 0.05

P – VALUE = 0.108766

Since,

P-VALUE   > 0.05

i.e.   0.108766 > 0.05

Result: There is no link between age group and the type of car people prefer to buy.

Factor Analysis

To order to coordinate, track and reduce large questionnaire objects Factor Analysis is used. In this report, the key factors that affect car purchases in the area of Mumbai are described in this review.

The emphasis is on the reasons that affect consumers in the automobile industry to purchase car.

In this research there are total 20 factors for cars which are given below :

Exterior Design (Look, Colours & Style)

Dash Board & Interior Design

Leg Spacing

Seats comfort

Mileage (Fuel Consumption)

Pick Up

Top Speed

Air Bags

Anti-Lock Braking System

Tubeless Radial Tyres

Key & lock Features

Rear Parking Camera

Status in the society

Dealers Offer

Brand Name

Price of car

Finance Availability

Resale Value

Repairing & maintenance cost

Petrol, Diesel & Gas

The respondents based on their own understanding of buying the cars were asked to rate these 20 factors on the scale of 1 to 5 where one is the lowest rating given to a factor and 5 being the highest rating given to the factor.

RELIABILITY

After conducting factor analysis, the reliability of the results is evaluated and reveals that the alpha of Cronbach is 0.88. Cronbach's alpha value 0.7 and higher guarantees internal accuracy and efficiency. The method used in this analysis is therefore extremely accurate

Case Processing Summary
Table 3:

		N	%
Cases	Valid	100	99.01
	Excluded	1	.99
	Total	101	100.00

Reliability Statistics
Table 4

Cronbach's Alpha	N of Items
.88	20

RESULT OF FACTOR

/ARIABLES= VAR001 VAR002 VAR003 VAR004 VAR005 VAR006 VAR007 VAR008 VAR009 VAR010

VAR011 VAR012 VAR013 VAR014 VAR015 VAR016 VAR017 VAR018 VAR019 VAR020

/EXTRACTION =PC

/METHOD = CORRELATION

/PRINT = INITIAL EXTRACTION ROTATION

/CRITERIA = ITERATE (25)

/ROTATION = VARIMAX.

COMMUNALTIES

	Initial	Extraction
VAR001	1.00	.72
VAR002	1.00	.66
VAR003	1.00	.77
VAR004	1.00	.75
VAR005	1.00	.57
VAR006	1.00	.70
VAR007	1.00	.77
VAR008	1.00	.65
VAR009	1.00	.60
VAR010	1.00	.68
VAR011	1.00	.68
VAR012	1.00	.67
VAR013	1.00	.61
VAR014	1.00	.64
VAR015	1.00	.73
VAR016	1.00	.73
VAR017	1.00	.71
VAR018	1.00	.64

VAR019	1.00	.72
VAR020	1.00	.63

TOTAL VARIANCE EXPLAINED

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.37	31.87	31.87	6.37	31.87	31.87	3.13	15.63	15.63
2	3.97	19.85	51.72	3.97	19.85	51.72	4.05	20.26	35.89
3	1.34	6.71	58.44	1.34	6.71	58.44	1.78	8.89	44.77
4	1.00	5.01	63.44	1.00	5.01	63.44	1.60	8.01	52.78
5	.95	4.76	68.20	.95	4.76	68.20	3.08	15.42	68.20
6	.89	4.47	72.67						
7	.75	3.74	76.41						
8	.71	3.55	79.96						
9	.59	2.96	82.92						
10	.52	2.62	85.54						
11	.50	2.50	88.04						
12	.40	2.01	90.05						
13	.34	1.71	91.77						
14	.32	1.62	93.38						
15	.29	1.47	94.86						
16	.27	1.34	96.19						
17	.24	1.22	97.41						
18	.22	1.11	98.53						
19	.16	.81	99.33						
20	.13	.67	100.00						

From this table it can be conclude that after applying the factor analysis on 20 variables, 5 factors are generated and captured overall 69 % of the 20 variable.

Component Matrix

	Component				
	1	*2*	*3*	*4*	*5*
VAR001	.76	-.16	-.34	-.07	-.03
VAR002	.71	-.32	-.23	-.05	.06
VAR003	.48	-.10	.37	.62	-.11
VAR004	.64	-.16	.34	.34	-.27
VAR005	.23	.60	.35	.04	-.19
VAR006	.76	-.16	-.07	-.23	-.21
VAR007	.72	-.07	-.10	-.26	-.41
VAR008	.74	-.28	.05	-.02	-.12
VAR009	.66	-.13	.17	-.20	.28
VAR010	.52	-.25	.41	-.11	.40
VAR011	.72	-.29	.22	-.16	.11
VAR012	.73	-.22	.08	-.07	.28
VAR013	.55	-.12	-.34	.38	.18
VAR014	.28	.70	-.07	.12	.22
VAR015	.47	.32	-.52	.30	.22
VAR016	.29	.80	.02	-.03	.08
VAR017	.22	.81	.03	-.06	.07
VAR018	.31	.70	.21	-.05	-.11
VAR019	.27	.77	.07	-.18	.10
VAR020	.54	.39	-.29	-.01	-.32

ROTATED COMPONENT MATRIX

	Component				
	1	2	3	4	5
VAR001	.35	.00	.44	.04	.64
VAR002	.47	-.14	.38	.07	.53
VAR003	.22	.04	.17	.83	.05
VAR004	.30	.04	.04	.72	.36
VAR005	-.02	.67	-.19	.28	.06
VAR006	.40	.05	.10	.11	.72
VAR007	.23	.11	.02	.12	.83
VAR008	.47	-.06	.15	.30	.56
VAR009	.71	.11	.10	.06	.26
VAR010	.81	.00	-.02	.17	.01
VAR011	.70	-.03	.04	.20	.40
VAR012	.71	.02	.25	.14	.30
VAR013	.23	-.04	.68	.23	.21
VAR014	.03	.72	.32	.00	-.08
VAR015	.03	.33	.77	.01	.17
VAR016	.01	.84	.14	-.03	.04
VAR017	-.03	.84	.09	-.06	.00
VAR018	.01	.78	-.08	.13	.13
VAR019	.08	.83	.03	-.12	.05
VAR020	-.09	.45	.27	.08	.58

After performing the varimax rotation method with using the extraction method of principle component

Factor 1 consists of 4 variables with the factor loading ranging from 0.70 to 0.81.

Factor 2 consists of 6 variables with the factor loading ranging from 0.67 to 0.84.

Factor 3 consists of 2 variables with the factor loading ranging from 0.68 to 0.77.

Factor 4 consists of 2 variables with the factor loading ranging from 0.72 to 0.83.

Factor 5 consists of 6 variables with the factor loading ranging from 0.53 to 0.83.

Factor 1 = var9 + var10 + var11 +var12

Factor 2 = var5 + var14 + var16 + var17 + var18 + var19

Factor 3 = var13 + var15

Factor 4 = var3 + var4

Factor 5 = var1 + var2 + var6 + var7 + var8 + var20

Variables	Factor name
Anti-Lock Braking System, Tubeless Radial Tyres, Key & lock Features, &Rear Parking Camera	Safety
Mileage (Fuel Consumption), Dealers Offer, Price of car, Finance Availability, Resale Value and Repairing & maintenance cost	Value
Status in the society & Brand Name	Choice
Leg Spacing & Seats comfort	Relaxation
Exterior Design (Look, Colours & Style), Dash Board & Interior Design, Pick Up, Top Speed, Air Bags and Petrol, Diesel & Gas	Characteristics

Result: 5 new factors are constructed using factor analysis and assigned as factors preferred for buying a car.

FINDINGS:

It can be concluded that taste of every individual matter when it comes to type of car they would prefer to buy, irrespective of their age and gender. It was found through factor analysis that safety, value, choice, are the factors responsible for buying a car. In economical cars the mostly the budget lies between number of people budget lies between 5.1 lakhs to 15 lakhs and purpose of buying the car is comfort. It was also found that people who travel on daily basis prefer more for diesel and CNG engines cars and who go sometimes or rarely opted for petrol engine cars.

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