Exploring Determinants affecting purchase behaviour: Opinion of Passenger Car Users

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Abstract: *Indian Automobile passenger car market is studded with multiple options, with both national and international brands. The availability of such a huge number of options creates a sense of confusion in the consumer decision making regarding buying. The concept of consumerism is growing in such a way that companies need to gauge the clear requirement of consumer so as to create differentiation from other brands. These differentiating parameters may be on the basis of Price, Technology, Luxury, fuel efficiency etc. This paper aims to find those differentiating parameters which are required to make a decision regarding purchasing of passenger cars in Gurugram district. The primary data was collected from 100 respondents through a structured questionnaire from Gurugram district and convenience sampling technique for data collection is used for this purpose.*

Keywords: *Buying Decision, Passenger Cars, Differentiating parameters,*


I. Introduction

The Indian auto industry is one of the largest industries in the world. It accounts for about seven per cent of the country's Gross Domestic Product (GDP). According to Indian Brand Equity Foundation (IBEF) the passenger vehicle production increases from 3.4 million in financial year 2016 to 10 million in financial year 2020 end. Domestic sales of passenger vehicles will grow from 2.8 million in 2016 to 9.4 - 13.4 million by 2026. Further it is expected to increase at a CAGR of 12.87 per cent during 2016-26. By 2020, India's share in the global passenger vehicle market may touch eight per cent from 2.40 per cent in 2015.

Total production of passenger Vehicles in India during financial year 2006-16, witnessed the fastest growth at a CAGR of 10.09 % and exports of Passenger Vehicles from India (million units) during FY06-16 witnessed the growth at a CAGR of 11.61 %. The following figure report clearer picture in this regard.

Figure 1: Production of Passenger Vehicles in India

Figure 2: Exports of Passenger Vehicles
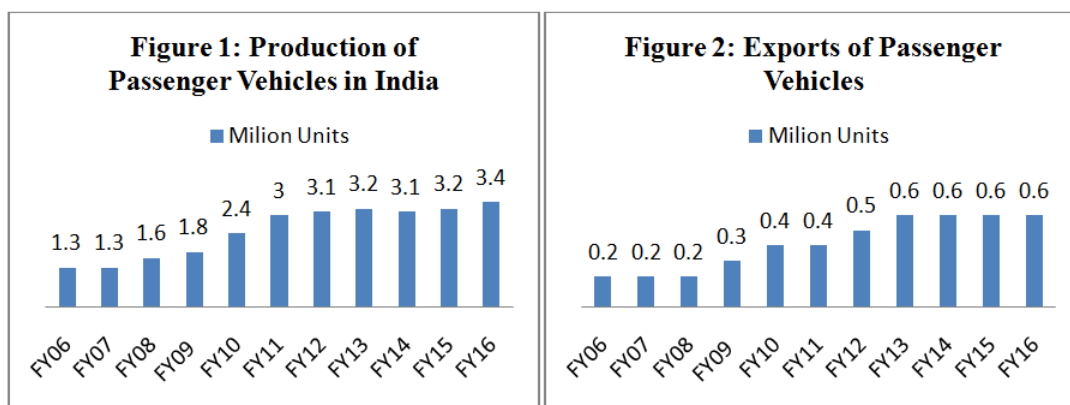
Source: SIAM, TechSci Research, Suzuki Motor Corporation

Advantage India: As per Automotive Mission Plan (2006–2026), Make in India. India has strong growth in the demand of automobiles due to rising income, increase in the population of middle class strata and having demographic dividend. Government initiatives to set up manufacturing plants through Make in India campaign is expected to give a robust growth to this sector of economy. India has significant cost advantages; auto firms save 10-25 per cent on operations as compare to Europe and Latin America. Pool of skilled manpower and an accelerating technology base would definitely induce greater investments. There has been a great support in the form of taxes and FDI encouragement. Moreover innovation in engine technology and alternative fuels supports the growth in auto industry in India.

Growth Drivers of Indian Automobile Sector
Increasing Income: GDP per capita has grown from $1,430.19 in 2010 to $1,805.57 in 2015, and is expected to reach $2,128.78 by 2018 end.
Increasing Middle-Class Population: Apart from the impact of rising incomes, widening of the consumer base will also be aided by expansion of the middle class, increasing urbanisation, and changing lifestyles
Policy Support: Government of India is promoting automobile sector through FDI resulting permission of hundred per cent FDI under the automatic route for this sector.
Easy Access to Credit: Indian car finance market is growing at a CAGR of 13.20 per cent from the year 2010-15 and it is expected to grow to $30.43 billion by 2020.
Size of Indian car finance industry during FY09-15, witnessed the fastest growth at a CAGR of 14.43%, which shows a rapid growth in the car finance business. More people start utilizing the luxury of car beyond their discretion income with right kind of financing facility available in market.
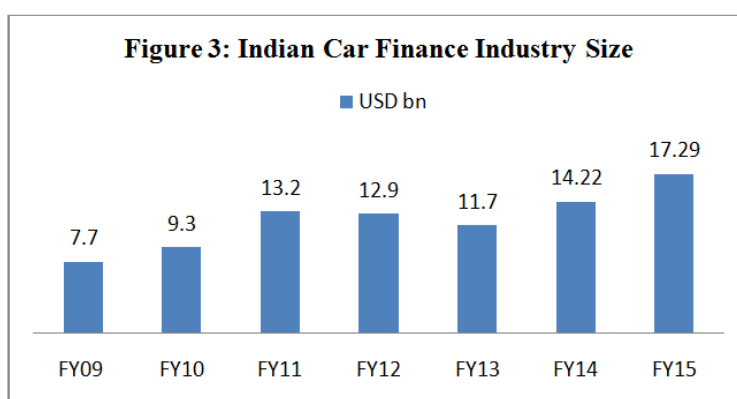
Source: Kotak Mahindra Prime, TechSci Research

Market Share of various important brands of passenger car manufacturers in India shows that majority of population buyers of passenger cars in FY 2016-17 prefers Maruti brand over other brands present in Indian market. Maruti as a brand in itself holds fifty one percent of market share where as Volkswagon holds only one percent.
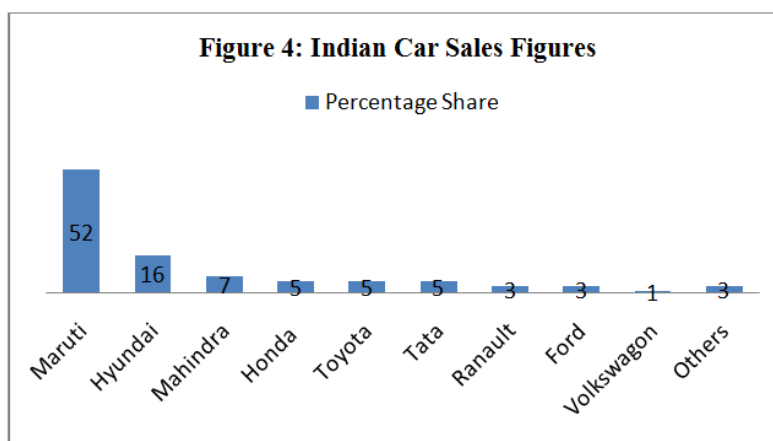
Source: April 2017 Indian Car Sales Figures and Analysis

From the above facts and figures, it is evident that passenger cars as a segment of automobile industry in India holds huge weight. The growth prospects clearly indicate that if marketer wants to fetch the benefits of growing market size passenger cars then they need to know on consumer preferences and deliver maximum utility to the consumers. So, they must study the parameters which can differentiate them from others so as to create competitive advantage over others. The brand which can justify value for the money invested can grab the biggest market share out of complete market of passenger cars in India.

II.   Literature Review

The researcher has studied various researches relating to determinants of purchase decision of passenger cars few, of them are as under:

Sr. No.	Author, Title Of Paper, Year of Publication	Objectives	Sample Size and Methods	Findings
1	Tsung-Sheng Chang, Wei-Hung Hsiao , "Consumers' automotive purchase decisions: The significance of vehicle-based infotainment systems" June 2011	To investigate which car infotainment system (CIS) value factor affect consumer car purchase intention.	319, Structural Equation Modelling	Perceived value drives the purchase intention. Usefulness and driving safety both are having positive influence over benefits and directly boost the value of a CIS in consumers' eyes.
2	Ms.A.Josephine Stella, Dr.K.Rajeswari, "Consumer Behaviour towards Passenger Cars - A study with reference to Virudhunagar District of Tamilnadu" January 2012	To identify different sources of information used by the buyers and their role in taking purchase decisions. To evaluate the purchase behaviour of the consumers. To examine the factors influencing the brand choice and choice of dealership	Chi square	The researcher has found that the most important factor that influences the consumers to use passenger cars was the price of the cars followed by low maintenance, high quality and long durability. There was significant relationship between the occupation and usage of car. There was significant relationship between income and brand name of car.
3	Sangeeta Gupta , "A Study of Buying Decision Influencers for Passenger Car Segment in New Delhi" December 2013	To establish the role of Reference groups in a consumer buying decision of a passenger car 2. To associate the effect of Price on consumer buying decision of a passenger car 3. To examine the Product attributes that influence the consumer buying decision for a passenger car 4.To recognize the main Source of Information and Clarification for the consumer	230, Average and Weight age assigned	The investigation of the paper has revealed that the reference group plays an important role in buying decision of passenger cars. Friends, family and relatives reference has been found to have significant source of information and influencers in the passenger car buying. Price and fuel efficiency in the passenger cars are found to be the foremost reasons for the preference by the customers. Among attributes, the three most important ones are Fuel efficiency, price and powerful engine.
4	Arpita Srivastava and Mitu Matta, "Consumer Behavior Towards Passengers Cars – A Study In Delhi NCR" 2014	The objective of study is to identify different sources of information used by the buyers and their role while making a purchase decision.	50, Chi Square	Consumers in this region were influenced by various factors such as culture, family, reference, age and life style. The most important factor. That influences the consumer to use passenger car is the price of the cars, social status and durability
5	Gautam Raj Kumar, "Purchase Decision of Indian consumers: the factors of attraction while purchasing car" March 2014	To identify the reason of purchasing car. To know customer process of information search of product. To examine the basis of evaluation of product. To find out the factors of attraction for purchase of car. To know their post purchase experience.	250, Kruskal-Wallis test	It has been found that safety, looks , shape, features and interior image and pre-sales and post sales policies have compelled the customer to select and buy the car.
6	Amita Girdhar, Suman Ghalawat, Kavitha C., "A study of consumer behaviour considering various Attributes towards purchasing a car" November 2015.	To find out the major factors that affect consumer perception towards different brands of car. To develop a model framework for various decision areas of	300, Factor Analysis and Discriminant Analysis	From factor analysis the five most important factors were taken based on their fator loading and Eigen values, these factors were Product Strategies, Technology Know-How, Level of Satisfaction, Workshop Features, and Service Orientation.

		consumers while purchasing a car		
7	Shahir Bhatt And Amola Bhatt , "Factors Influencing the Purchase of Hatchback Cars: An Empirical Study in Ahmedabad" March 2015	To explore the factors influencing the purchase of hatchback cars. To examine the relationship between the factors brought out from the study and Demographics.	300, Analysis is done by using multivariate technique like Factor Analysis followed by Annova and Independent Sample t test.	Five factors, namely, Brand promise, Features, Reach, Promotions, Perceived Quality and Price/Make influenced consumer's purchase of hatchback cars. Additionally, it is also found that there is a relationship between brand promise and age, monthly income and educational qualification. Also there exists a relationship between reach and monthly income, features and age, and price/make and marital status
8	Nilesh Kate and Dr. Arun Handa , "Empirical Analysis of Factors Influencing The Purchasing of Luxury Cars in Pune City" April 2016	To identify and analyse major attributes or factors consid- ered while purchasing luxury cars using factor analysis.	60, The techniques used to analyse the particular problem are Reliability Test, Factor Analysis (Kaiser-Meyer Olkin Measure of Sampling Adequacy)(Bartlett's Test of Sphericity)	It was found that people prefered "standard of living", "lucrative design", "service facility" and "perceived image" more than any other attributes.
9	Shotipat Sirichatchai, Tosaporn Mahamud, "Factors Affecting Consumers' Buying Behavior for Honda City CNG" July 2016	To study factors affecting consumers' buying behavior for Honda City CNG. To study consumers' buying behavior for Honda City CNG. To study the problems those have impacts on consumers' choices for Honda City CNG.	400, Chi Square, Pearson Correlation,	Honda (Thailand) Company Limited should pay attention to promotion For distribution channel, it should expand branches to cover strategic areas
10	Syed Naveed Altaf, Noor Azmi Hashim , "Key Factors Influencing Purchase Intentions towards Automobiles in Pakistan" 2016	The main objective of this paper is to identify and investigate the key factors which influence intentions to purchase passenger cars among consumers in Pakistan.	200, 5- point likert scale is used and with the help of SPSS, hierarchal regression is applied to access the impact of each variable.	All the three variables product, price & After Sales Service have significant impact on Purchase intention of automobile.

From the above literature review it is clear that the factors like safety, looks , shape, features, interior image, pre-sales and post sales policies, Fuel efficiency, price and powerful engine are important determinants which can differentiate one brand to other and derives the purchase behaviour of consumer.

Most of the previous available literature is available in other parts of country or world but due to growing socio-economic status of Gurugram being a corporate hub of north India, researcher wants to capture the purchasing behaviour of the residents of Gurugram district.

Objectives of Study
- To identify the significant factors regarding purchase decision of passenger cars
- To determine and analyse the association between demographic variables such as age, occupation and education of respondents and the selection of passenger car segment.

III. Methodology

The present work is empirical in nature and primary date is collected through a structured questionnaire. Sample size of 100 respondents is taken from the Gurugram district. The method of sampling used is convenience sampling.

The following determinants (as identified through reviewing the literature) are considered for determining the actual buying behaviour of consumers of passenger cars.

Price	Attractive Model	Brand Image
Fuel Economy	Resale Value	Alternative Fuel Option.
Driving comfort	Latest Technology	
Maintenance Cost	Safety Features	

Hypothesis

H_0: Demographic features of respondents do not make significant difference in purchasing passenger car of a particular segment or else one.

Table 1: Demographic Profile of Respondents

	No. Of Respondents	Percentage (%)		No. Of Respondents	Percentage (%)
Age			**Education**		
Less then 25 Years	29	29	No formal education	4	4
25-35	29	29	School level	50	50
35-45	38	38	Graduate	40	40
45-55	4	4	Post graduate	6	6
above 55	0	0	Others	0	0
Area			**Consumer Income**		
Rural	73	73	Less then 25,000	15	15
Urban	27	27	25,000 - 40,000	56	56
			40,000- 55,000	28	28
			55,000-70,000	1	1
			Above 70,000	0	0
Occupation			**Segment**		
Agriculturist	10	10	Sedan	44	44
Businessman	63	63	Hatchback	37	37
Employed in govt Service	11	11	SUV	15	15
Employed in Private Service	12	12	MUV	4	4
Others	4	4			

Source : Primary Data

Reliability Statistics:

Table no. 2: Reliability Statistics

Cronbach's Alpha	N of Items
.915	**10**

The coefficient of Cronbach's Alpha which is calculated through SPSS is much higher than the minimum acceptable level, hence the scale developed for the study stands to be reliable one.

IV.   Data Analysis And Interpretation:

Before discussing and analysing the factors that affect buying behaviour of the passenger car in Gurugram, basic things about the background of passenger car users such as knowing the sources of information and the person who influence the buying decision need to be analysed so that the results regarding factors affecting buying behaviour can be accessed and interprated in more lucid manner.

Figure 5: Regarding the source of information to consumers
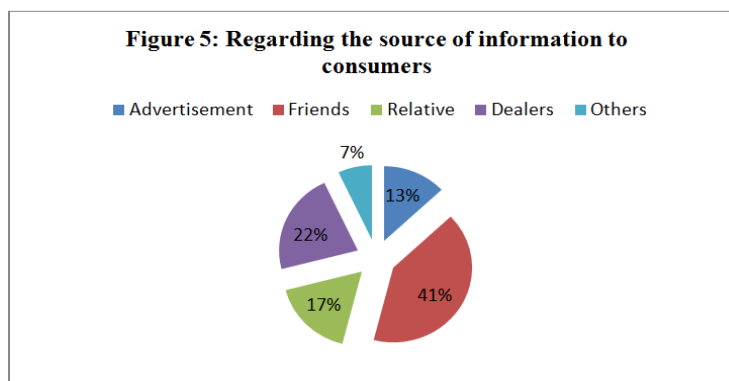
Source: Primary Survey

From the above, it is clear that forty one percent respondents get information from friends & only twenty two percent got the information from dealers. Thirteen percent respondents get information from advertisements, which means that the basic source of information regarding buying of passenger cars is friends and advertisements also plays a moderate role in informing passengers regarding the buying of passenger cars.

From the Figure 6 , it is evident that eighty two percentage of total respondents got influence by themselves for making a purchase decision for any passenger car means decision of consumers regarding buying a passenger car is not influenced by others their own understanding makes the decision.

Figure 6: Regarding the source influencing the consumer for purchase decision
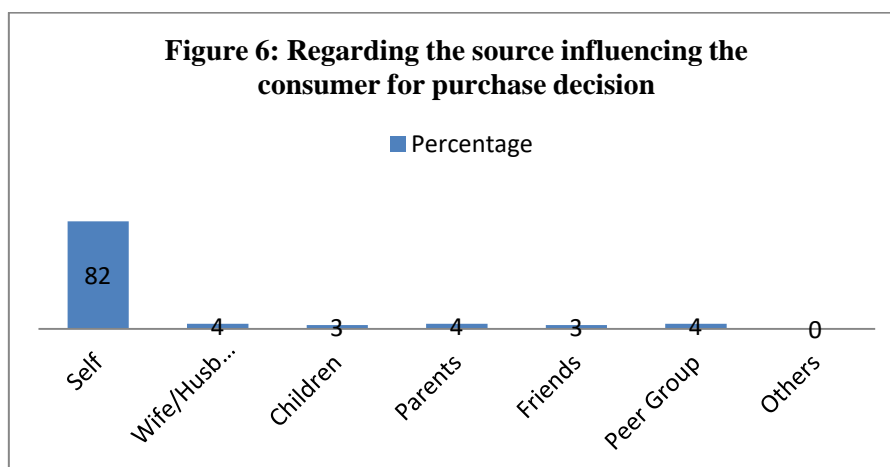
Source: Primary Survey

Table 3: Descriptive Statistics, ranks and significance level of various determinants of buying behaviour: one sample t-test

	Mean	Std. Deviation	Rank	t-value	df	Sig. (2-tailed)
Influence by Price	2.9200	1.52872	9	19.101	99	.000
Influence by fuel economy	3.1500	1.62912	6	19.336	99	.000
Influence by Driving Comfort	3.5400	1.34405	2	26.338	99	.000
Influence by Maintenance Cost	3.4800	1.34450	3	25.883	99	.000
Influence by Attractive Model	3.1800	1.40978	5	22.557	99	.000
Influence by Resale Value	3.1400	1.17224	8	26.786	99	.000
Influence by Latest Technology	2.8600	.82902	10	34.499	99	.000
Influence by Safety features	**3.8100**	**1.58716**	**1**	24.005	99	.000
Influence by Brand Image	3.3600	1.07797	4	31.170	99	.000
Influenced by Alternative Fuel Option	3.1500	1.62912	6	19.336	99	.000

Source: Primary Data, Ranks here have been assigned to the identified factors on the basis of their respective mean figure

As we study the descriptive statistics of various determinants taken under study, the mean score of determinants as safety features, driving comfort, maintenance cost, brand image and attractive model has top five factors respectively. Further, it is found that all the determinants whether it is resale value or brand image or any other factor, all has significant impact over the decision making of consumer regarding the purchase of passenger cars as per the result of one sample t-test. As per the data filled by respondents the most important determinant for decision making is safety feature i.e. majority of respondents believes that safety features of any passenger car can influence their purchase intentions.

Testing of Hypothesis

H_0 : Demographic features of respondents do not make significant difference in purchasing passenger car of a particular segment or else one.

To check the above association i.e. the association between car segments and demographic variables such as age, education and occupation, Chi square test is applied.

Table 4: Demographic Variables of respondents and Segments of Passenger Car: Chi Square test

	Automobile Segment			
	Chi-Square Value	Df	Asymp. Sig. (2-sided)	Result
Age Group	43.245[a]	9	0.001	Significant
Occupation	15.197[a]	12	0.231	Non-Significant
Education	49.504[a]	9	0.001	Significant

Source: Primary Data

According to the Chi Square value and its corresponding p value regarding the association between car segments and demographic variables, it is found that age group and education level of respondents are found significant in the purchase of particular car segment while occupation has no such relation.

V. Conclusion

Automobile industry on India, leading industry has attained remarkable growth and effectively contributed in GDP of country as it comprises various segments along with different varieties. Passenger vehicles mainly cars constitute the vital segment of this industry. Since various factors relating to the growth of automobile sector as discussed earlier give indication of more demand of passenger cars across the country, the pattern of demand regarding passenger cars in metropolitan cities affects the mindset in other small cities. Due to this the present work was designed to explore the significant factors which affects purchase behaviour of passenger car users in Gurugram district. Most of the respondents were belonging to rural area and it is found that advertisement is the main source of information about the features and configurations of passenger cars to the respondents. Among the identified factors, safety features is said to be most important one followed by the feature of driving comfort, maintenance cost and brand image respectively. Surprisingly the factors such as price and latest technology have been the least important factors as per the opinion of respondents. The present work is limited to only one district of Haryana, and views of the passenger car users of the remaining areas belonging to NCR may be known and investigate accordingly to verify the results of this work.

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