

FACTORS AFFECTING CONSUMER BUYING BEHAVIOR IN INDIAN SUV CAR SEGMENT

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ABSTRACT

Sports Utility Vehicle (SUV) market is one of the growing markets in India due to changed customer perceptions. Various studies in the past showed that buying behavior is not static it is dynamic. Consumer buying behavior changes as per the need, requirements and financial capacity of individuals. The main objective of this study is to identify the main factors which change the buying behavior of the Indian consumers for SUV segment. This study has considered only the Bhopal city of state Madhya Pradesh. A structured questionnaire is prepared on five point likert scale. Questionnaire is divided in to two parts. First part deals with demographic information of the respondents while second part deals with buying behavior and purchase decision. Reliability and validity of the questionnaires is tested and the instrument found reliable and valid. Reliability of questionnaire is tested by Chronbach alpha and for validity it is tested by two experts. For collecting data simple random sampling is used. Data is collected from only those samples which have SUV cars or having prospect of purchasing car. Study targeted to collect the data from 350 samples. For collecting the data two months have been taken. For data analysis Exploratory Factor Analysis (EFA) is used and data analysed on SPSS 20 software. Analysis found six important factors which affect the consumer buying behaviour for SUV cars in Bhopal city.

KEYWORDS: SUV, Consumer Buying Behavior, Structured Questionnaire, Reliability, Validity.

Introduction

India is the second-largest populated country in the world after China. The economy of India is growing at a faster pace compared to other countries in the world. After America-China trade war India is now home to many bigger companies like KIA Motors, Morris Garage, Isuzu Motors, Ford, Honda, BMW, and others. The Indian automobile industry is fourth largest in the World and seventh-largest commercial manufacturer vehicles in India. Indian automobile industry will reach to 18.18 trillion in 2026.

India is one of the major markets for SUV cars and Indian roads are suitable for SUV vehicles. The most popular SUV in India is Maruti Gypsy used for wildlife safari and other mountain sports. Other SUV cars present in India are Tata Safari Dicor, Honda CR-V, Mahindra Scorpio, Fords Endeavour, Toyota Fortuner, Mitsubishi Pajero, Chevrolet Captiva, etc. The growing economy of India is shifting population from lower-income class to middle-income class. As per India brand equity foundation India is expected to become a leader in shared mobility by 2030 providing opportunities for electric and autonomous vehicles. SUV cars are the first choice of young generation population in India and at present India is having large young population in comparison to other countries of the world. So market for SUV cars is very lucrative.

This study is trying to identify the important factors which affect the buying behavior of consumer during SUV purchase. This study is restricted to Bhopal city of state Madhya Pradesh where the population is approximate 7.33 Crores and prospective market for SUV cars.

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Literature Review

Choo and Mokhtarian (2004), various models have been developed of vehicle choice type. Basically the developers do not consider consumer's travel attitude, personality, lifestyle and mobility as factors that may affect the choices towards the vehicles. Demographic variables have been analyzed for deciding the factors influencing the consumer's choice towards car purchasing. Compact, mid-size, large, luxury, sports, small, pickup and sport utility vehicles have been analyzed for the same.

Noblet, Teisl, and Rubin (2006), the psychological factors are also responsible for the fuelled passenger's vehicles. The study focused on the empirical framework under eco-labeled conditions. Eco-information can affect the two-stage vehicle process of purchase, it has been particularly in this research. Eco information can be considered in the decision of vehicle purchase, but not generally at the class-level decisions.

Train and Winston (2007) a consumer-level model has been developed for analyzing the erosion of the US automobile manufacturers' market share during the past two decades. Nearly all of the losses of the US share market can be clearly explained by the changes in basic vehicle factors like size, price, and power, operating cost, reliability, transmission type and body type. Only US manufacturers improved the attributes of the vehicles where the manufacturers of Japan and Europe did not change the attributes of the vehicles.

Potoglou (2008), the popularity of SUV cars has been increased with a few implications for traffic accidents, air quality, and gasoline demands. Empirical findings report that on the relationship between neighborhood characteristics and vehicle type choice within the Census Metropolitan area of Hamilton in Canada. Discrete choice models of the household's vehicle type choice suggested that consumer's preferences for less-fuel efficient vehicles are affected marginally by the diversity of uses of land the residence.

Banerjee's (2010) market for passenger cars has been witnessed for phenomenal growth over the last few years. A high degree of competition has been found in this industry which is needed to understand because the consumer's choices are changing very frequently. Especially, the scenario is found to be very different whenever the customer is buying their second car. The buyers of the second car are having very different factors that influence buying behavior.

Zhang, Gensler, and Garcia's (2011) agent-based model (ABM) also used to investigate the factors which influence the consumer's behavior towards the choices of the brands for the automobiles. These factors can increase the effusion on eco-innovations which is AFVs (alternative fuel vehicles). Agent-based model provides an opportunity to consider the interdependencies between automobile industry and the key participants. Three experiments namely market pull, technology push, and regulatory push have been considered for the adoption of AFVs.

Raj, Sasikumar, and Sriram (2013) emotions associated with the consumer's choices for SUV's and MUV's cars are a special segment of the car industry. Some descriptive analysis of the consumer's behavior proved that marketing mix elements and associated brand equity from the perspective of consumers are important because it suggests both tactics and strategies. More than six factors have been analyzed during this research. Consumer's heterogeneous behavior towards the choice of brands of SUV cars can be identified mainly by its brand equity.

Shende (2014) in the present scenario, the Automobile industry is the most lucrative and attractive industry. Due to increase income and easy availability of finance people are purchasing cars very frequently in both rural and urban areas. Now the automobile market is highly competitive and consumers are changing their choices very frequently. Especially in the car segments, consumers are having a lot of choices. The purchasing choices are divided according to their behavior also. The passenger car segment is highly focused by the consumers of middle income class.

Gilmore and Patwardhan (2016), rapid expansion in income level and population in the developing countries, the demand for goods and services are increasing frequently, including the demand for automobiles, especially passenger cars. However, GHG (Greenhouse Gases) and air pollutants are increased by the use of passenger cars. Some options have been found to minimize the costs also. Over the vehicle lifetime the private costs are the combination of capital costs and discounted expected fuel cost over the lifetime of the vehicle.

Dumortier, Siddiki, Carley, Cisney, Krause, Lane and Graham (2015) from the reduced energy consumption the long-run financial benefits which might not be realized by the customers. To supply the information on the basis of total cost of ownership plays as metrics which is for the purchase

prices, the fuel cost and the other cost of the ownership. The research was based on five years fuel cost savings and total ownership which affects the consumer's choice for conventional hybrid, gasoline or battery electric vehicles.

Kushwaha and Sharma (2016) several environmental issues can be raised due to the increased market share of the automobile sector. Dual pressure is facing by automobile manufacturersto solve environmental issues such as carbon emission, global warming, etc. Firms can be judged by their financial, operational performances and marketing capabilities. This research took a green initiative towards the adoption of saving the environment. A sustainable relationship has been developed through the adoption of green initiatives.

Kumar (2018) examined consumer buying behavior and preference of consumers in India. The study found safety and performance are two important factors during car purchase. Karthik and Nigajuna (2018) analyzed consumer attitudes towards BIMAL auto Pvt. ltd Bangalore.

Objectives of the Study

The main objective of this study is to identify the main factors that are causing changes in buying behavior of the Indian consumers for SUV segment.

Research Methodology

The research design for this study is exploratory. Primary and secondary data has been considered for the study. A structured questionnaire is prepared for this study and survey method is used for the data collection. The questionnaire is prepared on 5 pointsLikert scale.After questionnaire preparation pilot testing of questionnaire is done and found suitable for the study. The reliability of questionnaire is tested by Chronbach alpha and for validity it is tested by two experts. When the instrument is found reliable and valid then it is used for study purposes. Simple random sampling is used for sample selection and study is restricted to Bhopal city only. Exploratory Factor Analysis (EFA) is used for extracting the factor.

Result and Discussion

Table 1: Descriptive Statistics of the Data

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Gender	338	1.28	.450	.978	.133	-1.049	.265
Marital Status	339	1.67	.470	-.739	.132	-1.463	.264
Age	338	1.77	.971	1.278	.133	1.151	.265
Qualification	339	3.29	.949	.559	.132	1.036	.264
Family Structure	339	1.31	.464	.812	.132	-1.349	.264
Occupation	339	2.31	1.552	.897	.132	-.338	.264
Family Income (Annually)	339	2.23	1.080	.383	.132	-1.128	.264
Accommodation Ownership	339	1.43	.812	1.924	.132	2.812	.264
Car Ownership	339	1.57	.496	-.269	.132	-1.939	.264
Valid N (listwise)	338						

Table 1 present the descriptive statistics of data, it covers the demographic profile of the respondents. It includes gender, age, marital status, qualification, family structure, occupation, family income, accommodation, and car ownership.

Table 2: Frequency Distribution of Gender

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	243	71.7	71.9	71.9
	Female	95	28.0	28.1	100.0
	Total	338	99.7	100.0	
Missing	System	1	.3		
Total		339	100.0		

Source: SPSS 20

Table 2 presents the frequency distribution of gender. Out of 350 samples, 338 samples is found appropriate. Out of 338, 243 (71.7% of total data) are males and 95 (28%) were females. It shows that most of the SUV run by male.

Table 3: Frequency Distribution of Marital Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	married	111	32.7	32.7	32.7
	unmarried	228	67.3	67.3	100.0
	Total	339	100.0	100.0	

Source: SPSS 20

Table 3 present the data onthe marital status of the respondents. Out of 100% data 32.7% are married and 67.3% are unmarried.

Table 4: Frequency Distribution of Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25	172	50.7	50.9	50.9
	25-35	101	29.8	29.9	80.8
	36-45	42	12.4	12.4	93.2
	46-55	17	5.0	5.0	98.2
	Above 55	6	1.8	1.8	100.0
	Total	338	99.7	100.0	
Missing	System	1	.3		
Total		339	100.0		

Source: SPSS 20

Table 4 present the frequency distribution of data on the basis of age. Most of the respondents lie in the age group of 18-25 (50.7%), 5% respondents are in the age group of 46-55 and only 1.8% lies in the age group of above 55. It shows that younger population has more craze towards SUV.

Table 5: Frequency Distribution of Family Structure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nuclear	233	68.7	68.7	68.7
	joint	106	31.3	31.3	100.0
	Total	339	100.0	100.0	

Source: SPSS 20

Table 5 present the frequency distribution of the family structure. 68. % families are nuclear and rest is joint families.

Table 6: Frequency Distribution of Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Student	162	47.8	47.8	47.8
	Self employed	53	15.6	15.6	63.4
	Government jobs	28	8.3	8.3	71.7
	Private jobs	71	20.9	20.9	92.6
	Part time jobs	4	1.2	1.2	93.8
	Unemployed	21	6.2	6.2	100.0
	Total	339	100.0	100.0	

Source: SPSS 20

Table 6 present the frequency distribution of occupation. Most respondents are students (47.8%), 20.9% respondents are in private jobs, 15.6 % are self-employed, 8.3% are in government jobs and rest are in part-time jobs and unemployed.

Table 7: Frequency Distribution of Family Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 5 lakh	107	31.6	31.6	31.6
	5-10 lakh	107	31.6	31.6	63.1
	10-15 lakh	65	19.2	19.2	82.3
	Above 15 lakh	60	17.7	17.7	100.0
	Total	339	100.0	100.0	

Source: SPSS 20

Table 7 present the frequency distribution of family income. 63.2% of the population lies in the income slab of 1 to 10 lakhs. 19.2% are in the slab of 10 to 15 lakhs and rest (17.7%) are having a family income of above 15 lakhs.

Table 8: Frequency Distribution of Accommodation Ownership

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Owned	247	72.9	72.9	72.9
	Rented	54	15.9	15.9	88.8
	Government quarters	22	6.5	6.5	95.3
	Others	16	4.7	4.7	100.0
	Total	339	100.0	100.0	

Source: SPSS 20

Table 8 presents the frequency distribution ownership of accommodation. Out of the total population, 72.9% have their own house and 15.9% population resides rented house, while 6.5% lives in government quarters.

Table 9: Frequency Distribution of Car Ownership

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	147	43.4	43.4	43.4
	No	192	56.6	56.6	100.0
	Total	339	100.0	100.0	

Source: SPSS 20

Table 9 presents the frequency distribution of car ownership in which 43.4% population has their own car while 56.6% respondents do not have their own car.

Exploratory Factor Analysis

The objective of the study is to identify the most important variable which affects consumer behavior during SUV purchase. The study considered various factors in the instrument with the help of literature review and expert suggestions. Factor analysis extracted the most important and correlated variables for the study. Highly correlated variables clubbed together into a few latent factors by using factor analysis.

To run the EFA (Exploratory Factor Analysis) data must follow the assumptions of the test. KMO test checks whether the number of observations in the dataset is enough for applying factor analysis or not. The variation must be in the variables to run the factor analysis. KMO value of more than 0.6 is considered to be satisfactory and shows that data is sufficient for factor analysis. Table 22 shows the KMO value is .940 and it fulfills data sufficiency condition.

Bartlett's test of sphericity checks the correlation among the variables. The null hypothesis states that no correlation among the variables while alternative says correlation exists among variables. If no correlation exists then it is useless to apply factor analysis. Here p-value is less than 5%, and study fails to accept the null hypothesis, it states that sufficient correlation exists among the variables that are required to run the factor analysis.

Table 10: KMO and Bartlett's Test for factor analysis

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.940
Bartlett's Test of Sphericity	Approx. Chi-Square	7091.043
	df	861
	Sig.	.000

Source: SPSS 20

Table 23 presents the eigenvalues of principal components. The number of components is equal to the number of variables. In principal component analysis eigenvalues of the first variable is always high. Factor selection is depending on the eigenvalue. Eigenvalue more than one is considered for the selection of factors. 6 factors are found suitable which are having eigenvalue more than 1 and explaining 58.07% variance of variables.

Table 11: Eigen Values of Principal Components

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	14.886	35.444	35.444	14.886	35.444	35.444	7.316	17.418	17.418
2	3.930	9.356	44.800	3.930	9.356	44.800	6.596	15.705	33.124
3	1.930	4.596	49.396	1.930	4.596	49.396	4.060	9.667	42.791
4	1.333	3.173	52.569	1.333	3.173	52.569	2.648	6.304	49.095
5	1.257	2.992	55.561	1.257	2.992	55.561	2.237	5.326	54.421
6	1.057	2.517	58.078	1.057	2.517	58.078	1.536	3.657	58.078
7	1.034	2.462	60.541						
8	.980	2.332	62.873						
9	.935	2.225	65.098						
10	.869	2.068	67.166						
11	.833	1.984	69.150						
12	.779	1.855	71.005						
13	.729	1.736	72.741						
14	.710	1.689	74.430						
15	.653	1.555	75.986						
16	.648	1.543	77.528						
17	.619	1.474	79.002						
18	.595	1.416	80.419						
19	.556	1.325	81.743						
20	.540	1.285	83.028						
21	.500	1.190	84.219						
22	.480	1.144	85.363						
23	.450	1.071	86.433						
24	.439	1.046	87.479						
25	.415	.988	88.467						
26	.403	.958	89.426						
27	.371	.884	90.310						
28	.365	.869	91.179						
29	.360	.857	92.036						
30	.342	.814	92.850						
31	.335	.797	93.647						
32	.309	.735	94.381						
33	.303	.723	95.104						
34	.289	.688	95.792						
35	.276	.657	96.450						
36	.257	.612	97.062						
37	.246	.586	97.648						
38	.220	.525	98.172						
39	.213	.508	98.680						
40	.204	.485	99.166						
41	.183	.436	99.601						
42	.167	.399	100.000						

Source: SPSS 20 Extraction Method: Principal Component Analysis.

Figure 1: Scree Plot-Graphical Representation for the Eigenvalues of Components

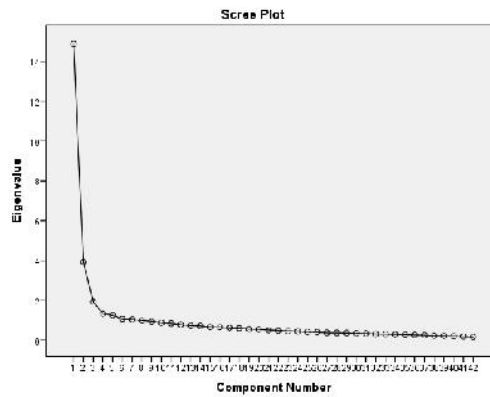


Table 12: Rotated Component Matrix^a

	Component					
	1	2	3	4	5	6
Q37	.786					
Q36	.764					
Q27	.753					
Q34	.746					
Q39	.745					
Q33	.742					
Q40	.737					
Q32	.701					
Q35	.646					
Q31	.633					
Q28						
Q42						
Q25						
Q24		.722				
Q23		.696				
Q11		.695				
Q21		.677				
Q15		.659				
Q22		.643				
Q17		.604				
Q26		.592				
Q13		.564				
Q16		.559				
Q19		.528				
Q18						
Q14			.719			
Q20			.661			
Q6			.607			
Q9			.537			
Q30			.512			
Q12			.502			
Q3						
Q10						
Q5						
Q4						
Q2				.651		
Q1				.634		
Q29						
Q8					.724	
Q7					.695	
Q41						.629
Q38						

Source: SPSS 20
 Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.
 a. Rotation converged in 11 iterations.

Table 23 is showing the factor loadings of variables with different extracted factors. Factor loading presents a correlation between variables and factors. Value varies from -1 to +1. Here only those factors are considered which have higher loading value. A higher loading value shows that variance of the variable is explained by that factor. A higher loading value supports the presence of convergent validity in the factors.

Table 13: Extracted Factors

Factors	Characteristics	Final Factors
36,37,27,34,39,33,40,32	Dealers/sales staff, Auto-expo, published report, country origin, existing customer review, brand website, coworker opinion, relative/neighbor opinion	Reach and influence
24,23,11,21,15,22,17,26	Size, warranty, the purpose of usage, after-sales service, value for money, easy parts availability, ease of maintenance, resale value	Service and Maintenance
4,20,6,9,30,12	Power pulling capacity, advance technology, interior design, colors, off-road ability, variants of a car	Performance and comfort
2,1	Fuel efficiency, price	Cost efficiency
8,7	Brand image, brand popularity	Brand Value
41	The decision of family members	Family Decision

Table 25 presents the factors which are extracted by using factor analysis. Six factors are identified which affect consumer behavior during SUV purchase. Factors are reach & influence, service & maintenance, performance & comfort, cost efficiency, brand value, and family decision. These are the important factors which affect consumer behavior during SUV purchase.

Conclusion

As the Indian SUVmarket is growing at a larger pace this study will help the consumers to consider the important factors which affect consumer buying behavior. The main objective of this study is to identify the important factors which affect consumer buying behavior of SUV cars. The study also explores the demographic factors of the consumers for the study. Data is filled with 338 SUV car owners or prospective owners. Study found that 71.7% are male while 78.3% are females who filled the data. 67.3% respondents are unmarried and young (50%) having age group 18-25. Only 43.4% population owns the SUV cars and 56.6% are the prospective buyers. The study found six important factors that affect consumer behavior during SUV purchases. Factors are reach & influence, service & maintenance, performance & comfort, cost efficiency, brand value, and family decision. These are the important factors which affect consumer behavior during SUV purchase. This study is helpful for prospective consumers of Madhya Pradesh in SUV car purchase.

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