

The buyer behavior study on purchasing the car: with special reference to Uttar Pradesh

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Abstract

This study attempts to find the five factors that influence the buyer behavior to purchase the car: safety & security, esteem, performance, economy and quality. Empirical evidence from the automobile industry suggests that cars are experience goods: consumers do not have complete information about some characteristics of cars, and can only learn about them after buying and trying them out. The main objective of the research paper is to explore and conceptualize various factors and develop a model, which influence the purchase patterns of cars in Uttar Pradesh. A questionnaire consisting of 39 items was developed to measure the construct and its dimensions. The first draft of the questionnaire was subject to a pilot testing through a focus group and an expert evaluation. Data were gathered from a 400 car users' sample of four metro cities in Uttar Pradesh. A structured questionnaire on five point rating (Likert scale) was administered by way of personal interview. For the purpose of analysis, statistical tool like Factor analysis has been used.

Keywords: Safety & security, Esteem, Performance, Economy and Quality

Introduction

Car purchasing decisions are of high involvement: the product is complex, there are considerable costs associated with poor decisions, and the transaction involves a high financial cost. The focus of this paper is to provide a framework to study markets for cars. One look at the automobile industry can help us to identify two important characteristics about cars. First, cars are durable goods: buyers usually buy a car with the intention of keeping for a long period of time; further, buyers can buy a used or a new car, since it is an industry with a well-developed secondary market. But cars are also experience goods: buyers cannot ascertain every characteristic of the car before buying the car. Buyers can learn a lot about cars before buying, but buyers still learn a lot after driving them; in particular, buyers learn whether they are a good match or a bad match. The paper represents a contribution to both the literature on experience goods and the one on cars. In models of durable products, buyers do not have complete information about some characteristics of the car, either because those characteristics are unobservable and cannot be determined before purchase, or because the buyer is unsure about the effect of such characteristics on her own utility, even though they may be observed. The only way to learn is by buying the car and trying it out. The market is customer driven with safety & security, esteem, performance, economy and quality being the key drivers. Automobile buying falls on to the category of

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complex buying behavior because customers are highly involved in a purchase and perceives significant differences among brands. Thus customers will pass through a learning process. Moreover, attitudes of others can come in between purchase intention and purchase decision (Kotler & Armstrong, 2006). As per the research conducted by Kotwal (2009), face off buyers now prefer to have cars with the space, comfort and luxury of a mid size saloon or sedan (Kotwal, 2009). With the growing affluence and technological advancement, there develops a certain maturity in taste, as evidenced by the growing popularity of the Indian Hatchback market. Many customers buy cars with the space and comfort, less the boot, as it is easy to negotiate in our ever-increasing congested cities. That is where the premium hatchback commands a respect in its segment. Though they are costing more money, customers buy them for their practicality and comfort they offer, without sacrificing the feel-good factor.

An attempt has been made in this paper to study the car buyer in order to analyze influencing factors. Purchase intentions were presumed to be the outcome of numerous antecedents - safety & security, esteem, performance, economy and technology. A set of 14 factors were identified after rounds of discussion with the industry representatives and car users. The first factor in our study is Safety and Security: As far as the safety and security are concerned consumers pay more for additional product attributes, such as engine capacity, brakes and air bags. Buyers will reflect on the added value of such attributes and will be willing to pay more for them, if the benefits of the attributes are perceived as outweighing the additional cost. However, buyer choice is largely dependent on the way in which different options are framed. Standard economics attempts to understand car purchasing behavior by assuming that individuals weigh-up the relative advantages from purchasing a car with a given set of attributes, against the lifetime costs, compared to alternative purchases. Within this it is assumed that consumers mentally 'score' different purchase options based on their preferences and purchase the vehicle that scores highest. Once a particular vehicle has been chosen consumers are offered optional 'extras' such anti-lock braking systems. These additional purchasing decisions are made based on the perceived additional utility they each provide. The major technological issues which are important currently are increasing energy efficiency, competency of internal combustion engine, reducing the weight of vehicles, incorporating high-tech safety features, etc. (Montero (2001). Second factor relating to Esteem: Consumer needs are sometimes guided and accentuated by the personal vanity and self emancipation considerations. People want to have some high esteem in the society, and they seem to think that they can obtain a high societal value, if they own a high value passenger car and attribute the possession of such a vehicle, as a means of achievement in their life. This was conceptualized by Netemeyer, Burton, Scott and Lichtenstein (1995). They devised an individual difference variable, which is consisting of personal vanity and achievement vanity (Netemeyer, Burton, Scott, & Lichtenstein, 1995). Third factor considered as Performance: Standard economic theory allows for a wealth of factors to be valued by consumers or to be the subject of consumer preferences (including functional qualities like cost, fuel efficiency and performance, as well as more subjective qualities like design preference), what it does not tend to allow for are the other cognitive and situational factors that may also influence consumer deliberations during the purchasing of a new car.

Evidence from behavioral economics and marketing highlights many ways in which consumer preferences can be both constrained and overridden by these additional cognitive and situational factors. Fourth factor of this study defined as Economy: The impact that price has on consumer behavior can be influenced by in-store marketing, such as special offers, by the prices of similar products and by consumer perceptions of changes in price. Policy should work with retailers to encourage price promotions on environmentally-preferable products. Although price incentives may initially cause consumers to react to price changes, consumer valuations of prices tend to change over time. This means that as consumers adapt to higher prices, initial changes to consumer behavior may not be maintained. Financial levers that increase over time can overcome this problem. Pricing of automobiles is a complex issue as it is dependant on fixed cost, economies of scale, technology and other aspects. Competition and consumer demand also play important role in this. Currently, most of the automobiles companies consider price reduction as major strategic move for survival.

According to Mr. P Balendran, Vice President (Corporate Affairs), "General Motors India, the growth is happening only in the small car segment. People buying small cars are very cost conscious. General Motors is planning to launch its second small car in India in the 800-900 cc segments. The compact car will be unveiled in 2010". According to Hiroshi Nakagawa, India head of Toyota Kirloskar Motors, "Small cars play a very important role and cover as much as 75 per cent of car volumes in India and currently does not include in Toyota Kirloskar's portfolio. Toyota had announced Rs 1,400 crore investments to launch a 'strategic small car' for the Indian market by 2010. The entry car will be enhanced with below 1200-cc in petrol and below 1500cc in diesel". For price reduction, companies need to take series of decisions at every stage of production and selling; starting from managing factors of production and supply chain to negotiation with dealers. Price is one of the factors that influence sales variability of products and services significantly. Consumers have a tendency to overvalue the short-term and undervalue the future so tend not to consider the long-term running costs associated with products. Researcher selected Quality as the fifth factor: technology enhancements have allowed automobile manufacturers to reduce automotive emissions and improve fuel economy per vehicle in the last few decades. However, until manufacturers offer emission-free vehicles, such as ones powered by fuel cells, vehicles will continue to contribute to air pollution. Indeed, with growth in population and wealth and fairly low fuel costs, demand for individual transportation and vehicle miles traveled will likely increase. A proprietary study conducted by McKinsey and the Associated Chambers of Commerce and Industry of India (summarized in PTI, April 18, 2005; Newsweek International November 28, 2005, and the Financial Times, December 1, 2005) estimates that by 2015 global auto production is likely to reach \$1.9 trillion dollars, of which around \$700 billion dollars will be produced in low cost countries. The growth in Indian economy encounters the growth in industrial production. According to the Society of Indian Automobile Manufacturers (SIAM), the Indian automobile industry has maintained a steady growth of 20%. The industry currently contributes about 5% of the GDP and it is targeted to grow fivefold by 2016 and account for a geographically diversification. In addition to matching competitor's new products and upgraded machinery, technology is over 10% of

India's GDP. Automotive Mission Plan (AMP) expects the industry to reach a turnover of \$150-200 billion in the next ten years from the current \$45 billion levels.

Literature review

The researchers conducted literature review to find out various studies conducted on the buyers of car in different parts of India and abroad. The following are some of the studies and their relevance to the researcher's area of research. Research by Sagar, Ambuj and Chandra (2004) showed in their approach paper as to how the Indian car industry has leaped forward technologically, driven by a confluence of factors such as intense competition, demanding consumer preferences, government policies (especially tightening emission standards) and the global strategies of the various players. They elaborate that cars manufactured in India are based on designs, incorporating advanced technologies, that are often comparable with those available globally and Indian car exports are also growing. A study by Lang motors (2007) found a list of 20 factors to be the most important factors that influence purchase of car. They are as follows 1 - Reliability / Dependability, 2 - Exterior Styling, 3 - Price / Cost to Buy, 4 - Interior Comfort, 5 - Value for the Money, 6 - Fun to Drive, 7 - Reputation of the Manufacturer, 8 - Quality of Workmanship, 9 - Engine Performance, 10 - Road-holding / Handling, 11 - Fuel Economy, 12 - Storage and Cargo Capacity, 13 - Ride Quality on Highway, 14 - Durability / Long Lasting, 15 - Safety Features, 16 - Future Trade-In / Resale, 17 - Length of Warranty, 18 - Rebate / Incentive, 19 - Discount / Value Package, 20 - Environmentally Friendly Vehicle. Similarly a study by Power and associates (2005) listed the following nine to be the most important reasons for purchasing the car - 1 Styling, 2 Reliability, 3 Costs too much, 4 Poor quality, 5 Resale value, 6 Too small, 7 Lacked performance, 8 Didn't offer incentives, 9 Poor gas mileage. A study published in Anonymous (2008a) UK found for as many as 71% of customer price was the most important factor, followed by fuel economy, running costs, fuel type and Vehicle Excise Duty (VED) costs. Similarly an article published in Anonymous (2008b) quoted After Price; Reliability is the number one factor for buyers. Car buyers' rate reliability over fuel efficiency as their primary decision makes. Fuel efficiency and safety rank second and third in importance Performance not a top priority for most car buyers.

Aim of the study

The aim of the study is to obtain a current picture of the purchasing factors of car buyers. Therefore a framework illustrating the relationships between safety & security, esteem, performance, economy and quality with fit for buyers is proposed and tested in the current study. Discovered relationships between the variables will allow marketers to incorporate variables into a marketing mix better suited to the needs of the four- wheeler automobile markets.

Objective of the Study

To analyze the purchasing behavior of the car buyers in Uttar Pradesh.

Research Methodology

The study is basically exploratory in nature and attempts to analyze the car buyer's responses regarding various purchasing factors in Uttar Pradesh. A total of 400 respondents were selected from four metro cities (Noida, Agra, Lucknow, and Varanasi) of Uttar Pradesh. The method of purposive sampling was employed whereby the respondents had to fulfill the criteria of having used the online shopping purchases. The questionnaires were personally hand-delivered in workplaces, homes, and shopping malls. The questionnaire was developed with the help of literature, consultation with academicians and automobile experts. Respondents were asked to rate the 39 items relating to car. Responses to all the statements in the questionnaire were measured on five-point Likert scale, ranging from 1= strongly disagree to 5= strongly agree. Demographic information such as gender, age, marital status, education level, and income was also collected. The validation of survey instrument was checked through pilot testing of 100 respondents and variables were finalized after ensuring the balanced approach and objectivity of the survey. Collected data were processed in the statistical software package of SPSS-17 used to prove the hypothetical model. From this structured data, suitable information was extracted, analyzed, tabulated and illustrated with the help of factor analysis.

Respondents' Profile

Table 1: Respondents profile

Demographic Variables		Percent
Education	Intermediate	3.5%
	Graduates	16.2%
	Post graduates	28.7%
	Professionals	51.6%
Occupation	Govt. job	34.2%
	Private job	25.1%
	Self-employed	4.5%
	Unemployed	5.7%
	Students	30%.
Age (in Years)	16-25	31.3%
	26-35	27.6%
	36-45	20 %
	46-55	14.7%
	Above 55	6.3%
Gender	Male	47.00%
	Female	53.00%
Income (Rs.)	Below 20,000	25.64%
	20,001- 40,000	24.38%
	40,001- 60,000	17.83%
	Above 60,001	32.15%

The profiles of respondents are as follows:

Education: Intermediate-3.5%, Graduates-16.2%, Post graduates-28.7%, Professionals-51.6%. Occupation: Govt. job-34.2%, Private job-25.1%, Self-employed-4.5%, Unemployed-5.7%, Students-30%. Age: 16-25 year-31.3%, 26-35 year-27.6%, 36-45 year-20%, 46-55 year-14.7% and above 55 year-6.3%, Gender: Male-47% and Female-53%, Income: Less than Rs.20,000 p.m.-

25.64%, Rs.20,001-40,000 p.m.-24.38%, Rs.41,000-60,000 p.m.-17.83%, & Above Rs.60,001 - 32.15%.

Analysis and Discussions

To get an idea of influencing factors of car buying, following 39 pre-decided statements have been used:

Table 2: Items on purchasing the car

Code	Statements
1	Car finance companies have made the purchase of a bike easy for middle class families.
2	I generally wait to learn, how good a new product is, before trying it.
3	Fuel efficiency of a car is more important rather than its appearance.
4	Car should have good resale value.
5	Car should be comfortable to drive even for long journey.
6	Car should look attractive whatever the cost it may occur.
7	Exteriors of the car should be attractive.
8	I feel proud when I drive the Car.
9	A car should offer wide variety in color range.
10	The car should incorporate latest technology.
11	I think car is status symbol for me.
12	Car gives me sense of independence.
13	I enjoy when I drive the Car.
14	Car is a necessary product nowadays.
15	I want to buy cheap Car.
16	I think foreign collaboration cars are always quality products.
17	I want to buy a good quality car even at higher price.
18	I always first look at the brand name of car before buying.
19	I want to own a car when new model is introduced in the market.
20	I prefer to buy a car whose spares parts are easily available.
21	Pickup of a car is its most critical part.
22	It is good to buy car on installment basis.
23	Anti-lock braking system helps to maintain better steering control.
24	Interiors of the car should be luxurious and attractive.
25	Air bags should be standard feature of passenger cars.
26	Air conditioner should be standard feature of the car.
27	Warning lights should be flash if door is not properly shut.
28	Automatic fuel flap and trunk opener is must for a car.
29	Strong dealer and service network is very important.
30	The greater the safety, the greater your driving pleasure.
31	High impact safety bars on all doors should be standard feature of the car.

32	Car should have seating capacity for joint family.
33	Diesel driven cars are more economical rather than petrol driven ones.
34	Car should be durable for long term.
35	Dealer should provide better after sales service.
36	Car should have maximum luggage space.
37	Engine capacity is important part of the car.
38	Brakes of a car are its most critical parts.
39	Sitting space of the car should be comfortable.

39 statements included for this study. The above mentioned statements having five point Likert scales were subjected to factor analysis. Before the application of factor analysis the following five techniques were also used for the analysis of data:

- Correlation matrix:** The correlation matrices computed and examined. Correlation matrix was constructed using gathered data. The correlation matrix revealed that there is a strong positive correlation between the statements. These statements were considered appropriate for factor analysis procedure.
- Anti-Image Correlation Matrix:** After correlation matrix, anti correlation matrix was also constructed. This matrix shows that partial correlations among the statements are low for example anti- image correlation of statement 1 with respect to statements 1 to 39 are 0.111, 0.232, 0.123, 0.242, 0.107, .90, 0.163, 0.174, 0.153, 0.036, 0.07, 0.163, 0.036, 0.194, 0.142, 0.014, 0.48, 0.131, 0.226, 0.163, 0.142, 0.253, 0.142, 0.135, 0.163, 0.172, 0.141, 0.153, -0.172, 0.148, 0.195, 0.295, 0.185, 0.018, 0.014, 0.114, 0.164, 0.126, 0.184, 0.114, 0.152, 0.124 and 0.142. Similarly most of the off diagonal elements are small indicating that real factors exist in the data which is necessary for factor analysis.
- Kaiser- Meyer-Olkin Measure of Sampling Adequacy (MSA):** Kaiser Meyer Olkin measure of sampling adequacy focuses on the diagonal elements of partial correlation matrix. It is clear that all of the diagonal elements of partial correlation matrix were sufficiently high for factor analysis. The values of diagonal elements of partial correlation matrix from statement no. 1 to 39 are as follows: 0.758, 0.690, 0.759, 0.857, 0.685, 0.664, 0.884, 0.864, 0.743, 0.684, 0.787, 0.593, 0.782, 0.753, 0.882, 0.648, 0.637, 0.795, 0.853, 0.748, 0.652, 0.628, 0.794, 0.874, 0.685, 0.752, 0.674, 0.695, 0.745, 0.759, 0.656, 0.685, 0.699, 0.647, 0.740, 0.784, 0.895, 0.643, and 0.783.
- Test the Sampling Adequacy:** Test of sampling adequacy was then performed. Sum of the values of diagonal elements of partial correlation matrix from statement no. 1 to 43 (0.758+ 0.690+ 0.759+ 0.857+ 0.685+ 0.664+ 0.884+ 0.864+ 0.743+ 0.684+ 0.787+ 0.593+ 0.782+ 0.753+ 0.882+ 0.648+ 0.637+ 0.795+ 0.853+ 0.748+ 0.652+ 0.628+ 0.794+ 0.874+ 0.685+ 0.752+ 0.674+ 0.695+ 0.745+ 0.759+ 0.656+ 0.685+ 0.699+ 0.647+ 0.740+ 0.784+ 0.895+ 0.643+ 0.783)/39 was 0.739. This shows that statements are good enough for sampling.
- Bartlett's Test of Sphericity:** From the table no. 3 Bartlett's Test of Sphericity was also conducted to check the overall significance of the correlation matrices. The value of Kaiser-Meyer-Olkin Measure of Sampling Adequacy is 0.875. The test value of Bartlett's Test of Sphericity was significant and it is indicating that correlation matrix is not an identity matrix.

Table 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.875
Bartlett's Test of Sphericity	Approx. Chi-Square	1368.040
	Degree of freedom	780
	Sig.	.000

Table 4: Principal component analysis: Varimax rotation Matrix

Statements	Factor-1	Factor-2	Factor-3	Factor-4	Factor-5	Communalities
1	-.017	.004	-.094	.099	.535	0.263
2	.133	-.016	-.030	.078	.403	0.658
3	.297	-.037	.736	.137	.155	0.582
4	.038	.100	-.008	.883	.053	0.663
5	.137	.228	.845	.037	.025	0.662
6	.055	.079	.227	.348	.075	0.512
7	.142	.718	-.121	.220	.207	0.574
8	.118	-.014	.264	.504	.040	0.251
9	-.120	.446	.505	.127	-.012	0.474
10	.025	.157	.140	.211	.694	0.536
11	.102	.540	.022	.009	-.167	0.471
12	.211	.042	.558	.165	-.137	0.390
13	.221	.162	-.039	.054	.071	0.233
14	.224	.000	.197	-.076	.290	0.265
15	.115	.093	.072	.667	.213	0.462
16	-.094	.144	.256	.030	.676	0.468
17	.106	.063	.445	.008	.125	0.144
18	.368	.120	-.049	.362	.012	0.373
19	.225	.190	.486	.166	-.146	0.437
20	.105	-.071	.761	-.088	.232	0.346
21	.383	.228	.076	.496	-.196	0.569
22	.223	.449	.204	.416	.080	0.625
23	.211	.071	.034	.126	-.070	0.407
24	.294	.628	.056	.081	-.087	0.520
25	.783	.574	.181	.016	-.050	0.570
26	.315	.861	.036	.436	.371	0.607
27	.576	.538	-.040	.162	-.020	0.253
28	.414	.045	-.094	-.072	.559	0.562
29	.391	.087	.060	.077	.087	0.353
30	.171	.445	.423	.228	.031	0.486
31	.266	.476	-.004	.425	.131	0.349
32	.387	.327	.324	-.090	-.222	0.553
33	.536	.180	.016	.689	-.038	0.488
34	.460	.196	.338	.360	.351	0.364

35	.579	.236	.112	-.029	.200	0.374
36	.496	.422	.118	-.034	.341	0.565
37	.756	.153	.062	.108	.130	0.611
38	.631	.213	.325	.146	-.151	0.595
39	.447	.023	.221	.113	.306	0.368

Principal component analysis: Varimax rotation Matrix

It is clear from above matrix that the factor loading is different from unrotated matrix but the communalities are same. In this case, statements no. 25, 37, and 38 have high positive correlations for factor-1. It means that statements no. 25, 37, and 38 can be clubbed into a new factor. Similarly statement no. 7, 24 & 26; statement no.3, 5 & 20; and statement no. 4,15 &33 and statement no. 10 & 16 have positive correlations with factor-2, 3, 4 and 5 respectively and also can be clubbed into new factors.

Explanation of Variance

Total variance has been explained by table no. 5.

Table 5: Total variance explained (Rotation)

Factors	Initial Eigen value			Rotation Sums of Squared Loading		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.865	24.759	24.759	3.516	19.472	19.472
2	2.823	19.463	44.222	2.674	17.766	37.238
3	1.843	17.743	61.965	1.764	15.422	52.660
4	1.533	10.372	72.337	1.453	13.643	66.303
5	1.137	4.943	77.280	1.116	10.977	77.280

Total variance explained with rotation, the Eigen values are different for factor-1, 2, 3, 4, & 5 in comparison to previous unrotated matrix. The Eigen values for factor-1, 2, 3, 4, & 5 are 3.865, 2.823, 1.843, 1.533, and 1.137 respectively. Percentages of variance for factor-1, 2, 3, 4, & 5 are 24.759, 19.463, 17.743, 10.372, and 4.943 respectively. It indicates that three factors extracted from 39 statements have cumulative percentages up to 77.280% of the total variance. This is pretty good bargain, because researcher is able to economize on the number of variables (from 39 statements reduced them into 5 underlying factors).

Criteria for significant factor loading

Now the role of factor loadings becomes important for interpretation of the factors. Factor loading represent a correlation between statement no.1 and factor-1. The criteria given by J. Hair where factor loadings based on sample size are taken as the basis for decision about significant factor loading was adopted. This research had 400 respondents as sample, a factor loading of 0.600 has been considered significant. The fourteen statements no. 3, 4, 5, 7, 10, 15, 16, 15, 20, 24, 25, 26, 33, 37, & 38 have high factor loading. Rest of the statements have low factor loading "Car finance companies have made the purchase of a bike easy for middle class families" (-.017), "I generally wait to learn, how good a new product is, before trying it." (.133), "Car

should look attractive whatever the cost it may occur." (.055), "I feel proud when I drive the Car." (.118), "A car should offer wide variety in color range." (-.120), "I think car is status symbol for me." (.102), "Car gives me sense of independence." (-0.061), "I enjoy when I drive the Car." (.221), "I want to buy a good quality product even at higher price" (.224), "I always first look at the brand name before buying" (.106), "I want to own a car when new model is introduced in the market." (.368), "Pickup of a car is its most critical part" (.225), "It is good to buy car on installment basis" (.383), "Anti-lock braking system helps to maintain better steering control" (.223), "Warning lights should be flash if door is not properly shut" (.211), "Automatic fuel flap and trunk opener is must for a car" (.576), "Strong dealer and service network is very important." (.414), "The greater the safety, the greater your

driving pleasure." (.171), "High impact safety bars on all doors should be standard feature of the car." (.266), "Car should have seating capacity for joint family" (.387), "Car should be durable for long term" (.460), "Dealer should provide better after sales service" (.579), "Car should have maximum luggage space" (.496), and "Sitting space of the car should be comfortable" (.447), were having factor loading below 0.600. These statements were not considered for naming.

Naming of factors

After a factor solution has been obtained, all variables have a significant loading on a factor, the researcher attempt to assign some meaning to the pattern of factor loadings. Variable with higher loadings are considered more important and have greater influence on the name or label selected to represent a factor. Researcher examined all the underlined variables for a particular factor and placed greater emphasis on those variables with higher loadings to assign a name or label to a factor that accurately reflected the variables loading on that factor. The names or label is not derived or assigned by the factor analysis; rather, the label is intuitively developed by the factor analyst based on its appropriateness for representing the underlying dimension of a particular factor. All five factors have been given appropriate names on the basis of variables represented in each case.

Table 6: Naming of factors

Factor Number	Name of factor	Label	Statement	Factor Loading	Cronbach's alpha
Factor-1	Safety & security	25	Air bags should be standard feature of passenger cars	0.783	0.846
		37	Engine capacity is important part of the car	0.756	
		38	Brakes of a car are its most critical parts	0.631	
Factor-2	Esteem	7	Exteriors of the car should be attractive	0.718	0.773
		24	Interiors of the car should be luxurious and attractive	0.628	
		26	Air conditioner should be standard feature of the car	0.861	
Factor-3	Performance	3	Fuel efficiency of a car is more important rather than its appearance	0.736	0.821
		5	Car should be comfortable to drive even for long journey	0.845	
		20	I prefer to buy a car whose spares parts are easily available	0.761	
Factor-4	Economy	4	Car should have good resale value	0.883	0.885
		15	I want to buy cheap car	0.667	
		33	Diesel driven cars are more economical rather than petrol driven ones	0.689	
Factor-5	Quality	10	I think foreign collaboration cars are always quality products	0.676	0.764
		16	The car should incorporate latest technology	0.694	

- (a) **Factor-1: Safety & security** - This factor is most important factor which explained 24.759% of the variation. The statements as "Air bags should be standard feature of passenger cars" (0.783), "Engine capacity is important part of the car" (0.756), "Brakes of a car are its most critical parts" (0.631), are highly correlated with each other. These statements reflect "safety & security"; hence, the researcher names this segment as safety & security.
- (b) **Factor-2: Esteem** - Second kind of factor explained 19.463% of the variances. In this segment, researcher took the four important variables such as "Exteriors of the car should be attractive" (0.718), "Interiors of the car should be luxurious and attractive" (0.628), and "Air conditioner should be standard feature of the car" (0.861). These statements reflected esteem i.e. researcher named these variables esteem.
- (c) **Factor-3: Performance** - This factor explained 17.743% of the variations. "Fuel efficiency of a car is more important rather than its appearance" (0.736), "Car should be comfortable to drive even for long journey" (0.845), and "I prefer to buy a car whose spares parts are easily available" (0.761). These statements show performance hence researchers named this segment as performance.
- (d) **Factor-4: Economy** - This factor explained 10.372% of the variations. "Car should have good resale value" (0.883), "I

want to buy cheap car" (0.667) and Diesel driven cars are more economical rather than petrol driven ones (0.689). These statements show value hence researchers named this segment as economy.

- (e) **Factor-5: Quality** - This factor explained 4.943% of the variations. "I think foreign collaboration cars are always quality products" (0.676) and "The car should incorporate latest technology" (0.694). These statements show technology hence researchers named this segment as quality.

Reliability and validity of the construct

As far as the reliability and validity are concerned, analysis began with measuring the reliability of the construct. First of all, internal reliability of the scale was examined using Cronbach's alpha coefficient. Value of the reliability are 0.7 and above as an indicator of good reliability. This research has been found value of Cronbach's alpha coefficient greater than 0.700 which is good. After that convergent validity can be assessed from the measurement model by determining whether each indicator's estimated maximum likelihood loading on the underlying construct is significant. In the table - 4 all factor loading exceed 0.600. This shows evidence of convergence validity of this research. Composite reliability coefficients for each construct are

also finding out. Composite reliability should be greater than 0.7 to indicate reliable factors (Hair et al 1995). This research paper, the entire composite reliability coefficient are greater than 0.7 indicating reliability of all 39 variables. Now, composite reliability, variance extracted and Cronbach alpha coefficient values for all car buyers variables greatly exceeded the minimum acceptable values. This research indicated that measures were free from error and therefore yielding very consistent results (Zikmund, 2003). These tests showed that our data are reliable and valid for this research.

Managerial Implications: Information on buying behavior of car buyers will be useful for marketers to targeting the Uttar Pradesh. As Indian four wheeler industries is in boom today and more and more national and international players are interested in the emerging four wheeler market in India, an understanding of Indian car buyer behavior, with particular reference to the safety & security, esteem, operational, economy and quality are crucial. Profiling consumers by combining variables of car buyers' buying and demographic variables provide more meaningful ways to identify and understanding Indian buyer and target them with more focused marketing strategies (Hui, A.Y., et al., 2001).

Conclusion

The study carried out intends to have an insight into buyer's mind for purchasing the car. This research paper identified five purchasing factors of car. The first factor considered as safety and security. The safety and security buyers are pay more attention towards product attributes, such as engine capacity, brakes, anti-lock braking systems, increasing energy efficiency, competency of internal combustion engine, reducing the weight of vehicles, air bags and incorporating high-tech safety features. Car buyers will reflect on the added value of such attributes and will be willing to pay more for them, if the benefits of the attributes are perceived as outweighing the additional cost. Esteem was second factor of this study; car buyer's needs are sometimes guided by exterior, interior, and air conditioner of the car. Buyers from this segment feel proud when they get these features. Buyers want to have some high esteem in the society, and they seem to think that they can obtain a high societal value, if they own a high value passenger car. Third factor relating to operational of the car, buyers prefer to buy to buy a car which gives functional qualities like cost, fuel efficiency, comfort, availability of spare parts and performance, as well as more subjective qualities like design preference. These attributes influence the buyers to purchasing a new car. Economy also plays a very important role to purchase the car. The impact that value has on buyer behavior can be influenced by resale value, cheap car, economy, availability of finance. Last but not least, quality motivates the buyer to buy the latest technology car. These buyers also influence by the foreign collaborative technology. With the boom of many latest car manufacturers launching their product in the Uttar Pradesh, the study will definitely benefit the stakeholders of car manufacturers, dealers, financing agencies. The study result could also be utilized by these car manufacture and dealers, to formalize and strategies their policies towards an effective marketing strategy.

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