DETERMINANTS OF PRE-PURCHASE SEARCH BEHAVIOUR AMONG RURAL AND URBAN CAR BUYERS: A COMPARATIVE STUDY OF INDIA

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The study of consumer behavior involves the study of how people organize the acquired information and its use to make purchase decisions in case of rural consumers; it's somewhat difficult to understand their view while making choices among different products. Pre- purchase search behavior among car buyers has been studied and comparison of urban and rural buyers is carried out. Factor analysis, weighted average scores and independent sample T-test has been applied on the data of 477 respondents from Punjab region. "Out of Store Activity", "Others' Involvement" and "Dealer's Visits" are the main factors that make up the search behavior. It is found that urban and rural consumers are different in their attitude towards first two factors where as they have consensus as far as third factor is concerned.

The study of consumer behavior deals with the decision process and physical activity, individuals engage in when evaluating, acquiring, using, or disposing of goods and services (Loudon and Bitta, 2002). It is the field of study that focuses on consumer activities. Consumer behaviour should be primary focus of every aspect of the firm's marketing program. (Blackwell, Miniard and Engel, 2007). Behaviour of consumer is influenced by cultural forces, social factors like family, reference groups etc. and perceptions (Sternthal et.al 1982). Consumption is a key to understand why consumers buy products (Blackwell, Miniard and Engel, 2007). Consumer choices concerning the selection, consumption and disposal of products and services are often difficult and are important to the consumer, to marketers, and to policy makers. As a result, the study of consumer decision processes has been a focal interest in consumer behavior for over 30 years (Dogra&Ghuman 2008).

Urban population of India is concentrated in 3200 cities and towns, the rural population is scattered around six hundred thousand villages (Ramaswamy and Namakumari,

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2002). The rural consumer suffers mainly from the following handicaps: illiteracy, poverty, untimely shopping (meaning they mostly shop at the time of marriages and other special occassions) etc. (Sharma and Katewa, 1997). The distribution channels in villages are lengthy involving more intermediaries and consequently higher consumer prices (Reddy, 1997). Rural demand has been observed as more cyclic compared to urban one. The predominance of agriculture in the income pattern and influence of marriages and festivals are the main reasons (Dey and Adhikari, 1998).

The story of the car is one of the most important chapters in the history of transport. Millions of people use their cars to help them earn a living or to travel for pleasure. The government of India introduced radical changes in its economic policies in 1991. In May 1993, the passenger car industry was delicenced and majority foreign equity participation was allowed.

Automobile sales in India have been growing at a fast rate due to easier availability of loans and launch of several new models instead of the fact that most auto makers raised prices thrice in 2010 to offset rise in taxes and input costs. In today's scenario, people in rural and semi urban areas are trying to elevate their life style and people in metropolitan cities are completely disappointed with the public transport system. This has led to the increased sales of passenger car segment in the domestic market (Kaushik and Kaushik, 2008).

REVIEW OF LITERATURE

Following studies have been reviewed in order get insights into the pre-purchase search strategies used by car buyers.

Punj and Staelin (1983) postulated a descriptive model of information search and test the hypothesized relationships using survey data. Chi square test and regression analysis was used to analyze the data. The results showed that there are 2 unique components of prior knowledge. First consisted of knowledge of specific attributes associated with car models available for purchase and second were knowledge structures about cars or purchase decisions in general. The former causes less external search than the latter.

Narang (2001) made an attempt to identify the various characteristics of the rural markets in U.P. the objective of the study was to know the buying behavior of rural customers%. Results also revealed that rural purchase varied from product to product

and nominal amount of purchase is made from hawkers. It was recommended that infrastructure should be developed, more use of cooperative societies, utilization of multipurpose distribution centers etc. should be used to cater rural area to full extent.

Morton et al. (2002) analyzed the relation between car prices and demographics and also studied the role of internet in pricing of new cars. Results suggested that high income and high education indicated lower elasticity of demand as highly educated personnel were more effective negotiators. It was observed that women paid more for cars than men.

Rani (2008) studied the passenger car industry in India. Trends in car industry had been studied prior to liberalization and post liberalization. She pointed out that broad branding policy which gave new licenses to broad groups of automotive products started in 1985. After liberalization, the passenger car industry in the nineties was characterized by an increase in the number of brands available in the market which caused brands to compete on the basis of product features.

Goyal and Aggarwal (2008) attempted to find the relative importance of various factors that attract the customers while selecting a particular car in its segment. The study revealed that in case of purchase of luxury cars, the factors like horse power, model, luggage capacity, accessories and loan facility emerged as most significant factors, in case of medium cars, after sales service, availability of spare parts, model, shape and engine capacity were important and in case of small cars, the factors like accessories, engine capacity, after sales service and price were main considerations.

Lee and Cho (2009) tried to forecast demand for diesel passenger cars by considering consumer preference and government in South Korea. . The results implied that the consumers would prefer to purchase diesel passenger cars rather than gasoline cars because of the relative advantage in the operation cost. It was recommended that if car producers improve on the weak points of diesel cars such as comfort, noise, vibration levels etc, the diesel passenger cars would enjoy a substantial competitive edge over gasoline type cars.

Satish and Bhardhwaj (2010) carried out research on information search behavior among new car buyers. The data was collected from two Indian metros, Bangalore and Chennai. The data was analyzed with the help of factor analysis and variable so taken were related with attributes of cars. Four factors were extracted styling and comfort, value for money, safety and reliability and miscellaneous etc. the groups had been

distinguished using cluster analysis which was applied on search activity variables and personality variables. Four clusters so formed were named as broad moderate searchers, intense heavy searcher, low broad searcher and low searchers.

Peter's et.al (2011) identified psychological factors that are effective in measuring change in behaviour and helps in promoting fuel efficient cars. Model was proposed which integrated psychological variables that explained the purchase of fuel efficient vehicles by private consumers. The data was collected from 302 Swiss respondents whose household have bought a new car since 2002. Structured equation modeling was used to confirm the factors. It was concluded that problem awareness, symbolic motives and response efficacy influence the respective behaviour indirectly via effecting the direct predictors. Results reflected the salience of the positively valued features of new technology and alternative fuels.

NEED AND OBJECTIVE OF THE STUDY

A number of studies have been conducted on Pre-Purchase search behaviour towards cars covering urban segment (like Newman &Staelin (1972), Padmanabhan& Rao (1993), Goyal& Aggarwal (2008) etc.) but they have ignored the rural segment. Hence the thrust of this proposed study will be on a comparison between rural and urban consumers especially to understand the rural behaviour in a more comprehensive way.

India, being largely an agricultural and rural oriented economy,need for assessing the potential for rural business and studying buying behaviour in rural market is imperative. The rural market has become an important aspect of marketing in the Indian marketing environment today (Adesara, 2004). This analysis will be helpful for various car manufacturers and will help them to know about pre-purchase behaviour of rural segment. Accordingly they would be able to form different strategies for marketing their product and penetrating into the rural cadre. Hence, the main objective of the paper is to analyze and compare the Pre-Purchase search strategies adopted by urban and rural consumers before purchasing a car.

RESEARCH METHODOLOGY

The present study is mainly based on primary data collected from 477 respondents (238 Rural and 239 Urban respondents) from Amritsar, Jalandhar and Ludhiana. The

responses were collected through a pretested, well structured questionnaire which was administered personally. The questionnaire was pretested by having discussions with the experts in this field like managers of Maruti, Hyundai, Tata etc. of Amritsar region and hence questionnaire was edited accordingly. Convenient and judgmental sampling method has been used keeping in view the socio economic characteristics. Rural blocks have been decided on convenient basis and further sample is decided on the basis of standard of living of people means sample so extracted belongs to people of higher standard of living with atleast one car already in their household. Following table shows the structure of sample from population.

Table 1 Urban sample Composition

S.No	Cities	Sample Size
1.	Amritsar	80
2.	Jalandhar	79
3.	Ludhiana	80

Rural Sample Composition

Table 2 Amritsar

S.No	Blocks	Villages Covered	Sample Size
1.	Ajnala	Burj	16
2.	Amritsar 2	Balkalan	16
		Heir	17
3.	Baba Bakala	Jhamke	16
		BathuChak	15

Table 3 Jalandhar

S.No	Blocks	Villages Covered	Sample Size
1.	Nakodar	Qaimwala	17
		Boparai	16
2.	Phillaur	NawanPindNaicha	15
		Mandi	15
3.	Jalandhar 1	LuteraKhurd	16

Table 4 Ludhiana

S.No	Blocks	Villages Covered	Sample Size
1.	Samrala	Salana	15
		Seh-jo-Majra	16
2.	Khanna	BahuMajra	17
3.	Payal	Gurditpura	15
		Zirath	16

Five point scale has been used for the said purpose ranging from strongly agree to strongly disagree. To find out the pre purchase search strategies for cars, Factor Analysis was applied on set of 10 statements. After the extraction of factors, weighted average scores have been calculated to find the relative importance of these factors in different segments. The weights have been assigned according to the order of extraction of factors during factor analysis. The Independent Sample T-test has been applied on factors to find out their significance difference in both segments. The survey was conducted during the period of January 2012 to July 2013. Before the application of factor analysis, Reliability of scale has been verified with the help of Cronbach's Alpha which came out to be 0.782 which is good figure. (Hair 2011). All these techniques have been carried out with the help of SPSS 11.5.

Factor Analysis- Factor analysis is a set of techniques which, by analyzing correlations between variables, reduces their number into fewer factors which explains much of the original data, more economically (Nargundkar 2010). Explanatory factor analysis is used to identify the underlying constructs and investigate relationships among the key survey interval-scaled questions regarding pre-purchase search strategies. To test the suitability of data, reliability test has been conducted and value of Cronbach's alpha comes out to be .7820 which is significant. This significant value is derived without deleting any variable. So factor analysis is applied on 10 statements.

The following steps have been conducted to analyze the data:

1. The correlation matrix is computed and examined. It reveals that there are enough correlations to go ahead with factor analysis.
2. Kaiser-Meyer-Olkin Measure of Sampling Adequacy is computed which is found to be .809. It is indicated that the sample is good enough for sampling.
3. The overall significance of correlation matrices is tested with Bartlett Test of

Sphericity(approx chi square = 822.920 and significant at .000) provided as well as support for validity of the factor analysis of the data set.

Table-5: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.809
Bartlett's Test of Sphericity	Approx. Chi-Square	822.920
	df	45
	Sig.	.000

Table- 6: Rotated Component Matrix

Variables	Factors			
	F1	F2	F3	Communalities
V1	-.022	.258	**.718**	.582
V2	.010	**.740**	.053	.551
V3	.030	.424	**.572**	.508
V4	**.759**	-.043	.050	.581
V5	**.758**	.041	.225	.628
V6	.335	-.165	**.746**	.697
V7	**.651**	.310	-.054	.524
V8	**.516**	.356	.094	.401
V9	.302	**.648**	.193	.549
V10	.413	**.415**	.272	.416
Eigen Values	3.175	1.259	1.002	
Percentage of Variance	22.174	16.404	15.784	

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization

*Bold values represents highest loadings.

Hence all the assumptions indicated the appropriateness of the data to proceed for factor analysis. Principal component analysis was employed for extracting the factors based on

latent root criterion (i.e. Eigen Value>1). An Eigen value of 1.00 is the most common used criterion for deciding among the factors (Bryant and Yarnold, 1998). Three factors have been extracted that are explaining 54.362% of variance. The percentages of variance explained by three factors are 22.174%, 16.404% and 15.784% respectively

Criteria for the Significance of Factor Loadings

In interpreting factors, a decision must be made regarding which factor loadings are worth considering. A factor loading represents the correlation between original variables and its factors. The critirea for factor loadings are:

0.50 and higher (ignoring signs) – very significant
0.40 and higher (ignoring signs)- important
0.30 and higher (ignoring signs)- significant (Hair et. al 2011).

The results are obtained after the Varimax rotation and factor loading of 0.40 or higher (ignoring signs) has been considered significant for the present objective. After a factor solution has been obtained, in which all variables have a significant loading on a factor, then an attempt to assign some meaning to the pattern of factor loadings. Variables with higher loadings are considered more important and have greater influence on the name or label selected to represent a factor. All the underlying variables has been examined for a particular factor and placed greater emphasis on those variables with higher loadings to assign a name to a factor that accurately reflected the variable loading on that factor. The name or label is assigned by the factor analyst and not the computer program (Hair et.al 2011). All the three factors have been assigned suitable names summarized in Table-3.

Table-7 Factor Names and Loadings

Factor number	Name of dimension	Statements	Factor loadings
F1	Out of Store Activity	I spent lot of time in Reading Books and Auto Magazines	.759
		I spent lot of time in Reading about different Car Ratings	.758
		I spent lot of time in Looking at Automobile Shows on Different Channels	.651
		I spent lot of time in Visiting Different Websites for Information	.516

F2	**Others' Involvement**	I spent lot of time in Looking at Advertisements of Cars	.740
		I spent lot of time in Consulting Opinion Leaders	.648
		I spent lot of time in Inquiring about Cars from Different Experts	.415
F3	**Dealers' Visit**	I spent lot of time in Talking to Sales Persons	.718
		I spent lot of time in Test Driving Cars	.746
		I spent lot of time in Walking around Dealer's Showroom	.572

Factor 1 –Out of Store Activity

It is the most significant factor which explains 22.174% of the variance. The most important dimension in this factor is "I spent a lot of time in reading books and magazines" with maximum factor loading of 0.759. Three other statements that fall in factor 1 are "I spent lot of time in Reading about different Car Ratings" (0.758), "I spent lot of time in Looking at Automobile Shows on Different Channels" (0.651) and "I spent lot of time in Visiting Different Websites for Information" (0.516). All these statements clearly show that customers believe in out of store search the most as they may be thinking that people from Inside Company may tend to fool the customer. Customer from both rural and urban area tries to collect information from other mediums rather than company's offices or employees.

Factor 2- Others' Involvement

This is the second most important factor that explains 16.404% of the variance. The important dimensions in this factor are "I spent a lot of time in looking at advertisements of cars" (0.740), "I spent a lot of time in consulting opinion leaders" (0.648) and "I spent a lot of time in inquiring about cars from different experts" (0.415). All these statements clearly show that customers take the opinion of others in taking the decision regarding purchase of car. Advertisement is the most important medium in deciding for purchase of car in both urban and rural area.

Factor 3- Dealers' Visit

This factor accounts for 15.784% of the variance. The important factors in this factor are

"I spent a lot of time in talking to sales persons" (0.718), "I spent a lot of time in test driving cars" (0.746) and "I spent a lot of time in walking around dealer's showroom" (0.572). Both urban and their rural counterparts frequently visit different dealers to get more and more information about cars. Dealers try to satisfy them by providing them with test drives of different cars.

Relative Importance of Factors in Urban and Rural Areas

In the above analysis, we came out with the three main factors that reflect pre-purchase behaviour in both urban and rural areas. To find out the relative importance of these factors, we applied weighted average method whereby we find mean scores of the variables in particular factor individually of urban and rural customers. The following table shows the above said problem.

Table-8 Weighted Average Scores

Factors	Variables	Mean Score (Urban Region)	Weighted Average Score (Urban)	Mean Score (Rural Region)	Weighted Average Score (Rural)
Out of Store Activity	Reading Books and Auto Magazines	3.6862	3.7751	.4958	3.5021
	Reading about different Car Ratings	3.7364		3.5462	
	Looking at Automobile Shows on Different Channels	3.5732		3.3992	
	Visiting Different Websites for Information	3.7238		3.4958	
Others Involvement	Looking at Advertisements of Cars	4.0335	3.8438	3.7773	3.4509
	Consulting Opinion Leaders	3.5439		3.1050	
	Inquiring about Cars from Different Experts	3.9540		3.4706	
Dealers' Visits	Talking to Sales Persons	3.8400	3.7946	3.5714	3.6414
	Walking around Dealer's Showroom	3.5983		3.4790	
	Test Driving Cars	3.9456		3.8739	

Source- calculated by author.

The table-8 shows that factor "Out of store Activity" is more important in urban area with weighted average score of 3.7751 as compared to rural one with score of 3.5021. The second factor "Others Involvement" is again more important in urban area with weighted average score of 3.8438 and weighted average score of rural area is 3.4509.

The third factor "Dealers' Visits" is again important in urban area with weighted average score of 3.7846 as compared to 3.6414 in rural area. In short, we can say that all these factors are more important in urban area as compared to rural one.

Testing Significant Difference in Urban and Rural Segment

The main purpose of our study is to compare the consumer behaviour of urban and their rural counterparts in context of pre-purchase behavior towards cars. In the above pages, The important factors have been determined to explore pre-purchase behaviour and their importance in both urban and rural area is found out with the help of weighted average scores. Now, in order to know the significance difference in these factors in urban and rural areas, independent sample T-Test on factor scores have been applied.

Null Hypothesis

$\mathbf{H_{01}}$ – There is no significant difference in rural and urban customers in relation with "Out of Store Search" factor.

$\mathbf{H_{02}}$- There is no significant difference in urban and rural customers in relation with "Others' Involvement" factor.

$\mathbf{H_{03}}$- There is no significant difference in urban and rural customers in relation with "Dealers' Visits".

Table-9 T-Test on Pre-Purchase Factors

Variables	Urban Group		Rural Group		f-value	Significance
	Mean	Standard Deviation	Mean	Standard Deviation		
Factor 1	.949	.937	-.953	1.052	4.348	.038*
Factor 2	.1968	.896	-.19768	1.059	19.276	.000*
Factor 3	.0559	1.041	-.056	.955	1.498	.222

*represents significant values at 5% significance values.

The table-9 shows that factor1 and factor 2 are significant at 5% level of significance and factor 3 is insignificant. So H_{01} and H_{02} are rejected where as H_{03} is accepted. It can be said that there is a significant difference in urban and rural customers with regard to out of

store Activity and other's involvement where as both urban and rural counterparts are similar in their opinion regarding dealer's visits.

DISCUSSION, CONCLUSION AND IMPLICATIONS FOR MARKETERS

Present research work has been carried out to identify the pre-purchase search strategies followed by rural and urban consumers of cars. While it now seems clear that systematic search strategies are common among consumers and identifiable. The amount of search activity, a consumer actually engages in is a function of numerous factors. Newmann (1977),Punj&Staelin (1984) and Satish &Bhardhwaj (2010)have suggested different variables that are related to amount of external search. The basic factors that make up the search pattern are "Out of Store Activity", "Other's Involvement" and "Dealer's Visits". These factor names corroborate the study of Punj&Staelin (1984). So our results are in consensus with the results of previous studies. The results of weighted average scores clearly shows that all the factors are more important in urban area as compared to rural one. The Independent Sample T-test depicts that there is a significant difference in the search activity regarding "Out of Store Activity" and "Other's Involvement" and there is no difference in urban and rural respondents' opinion with respect to "Dealer's Visit". It may be due to the fact that people in Punjab usually rely on others to make decisions. Rural people are mostly influenced by friends, relatives, opinion leaders like Sarpanchs etc. where as urban people get influenced by automobile shows, exhibitions etc. So they both give less weightage to "Dealer Visits".

This study has various implications for the marketers. Firstly marketers come to knowabout the search pattern followed by rural and urban segment. "Out of search activity" is the most important factor in both segments. Marketers have to focus on advertisements in books and magazines, automobile shows, websites etc. in order to attract both segments of market.

Secondly, it has been found that people are least influenced by dealers. Companies should spend fewer resources on training of sales persons; test drives etc. and should focus their mind on other factors. Thirdly, study showed that both segments are different as far as the first two factors are concerned. So marketers have to come out with latest and different strategies to attract and penetrate into both segments. At last, it can be concluded that, it will be easier for an organization to design their communication strategies in specific ways for both segments after going through these results.

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