A Study of Buying Behaviour of Customers Towards Small Car Segment in Haryana

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Abstract

This study mainly focuses on influencing variables which have direct bearing on customers buying behavior towards small cars in Sirsa district. The information was collected from different areas of Sirsa district with the particularly help of questionnaires. Factor analysis and ANOVA have been used on data of 23 variables to test the significant difference between the groups of respondents that have the most significant effect on customers' behaviour towards small cars. The total of 165 respondents had been taken as a sample. The findings indicate that factor 3 is at the top by which customers make their psychological opinion for buying (Mean-4.30) followed by factor 4 after showroom variability (Mean-4.215), these factors become more effective and factor 1 personal desire (Mean-3.77) and factor 2 financial views (Mean-3.57) are less effective. The analysis of the study revealed an understanding of the customers differ significantly by gender, age, education, occupation and monthly income. The results of the study set up relationship between the variables which affect the customer's buying behaviour regarding small car segment.

Keywords: Buying behaviour patterns, Psychological factors, Factor analysis, and ANOVA.

1. Introduction

"The individuals make decisions related to spend their available resources, i.e. time, money, and efforts on consumption-related items and make a plan like what to buy, when , why , where , how often to buy and how often to uses it. The goal of studying customers' behaviour is to satisfy their needs. The study of customers' behaviour has been conducted by way of analysis of factors that influence purchase decisions and product use. ***Philip kotler*** *remarks that "customers are neither so simple that they do not require to be studied, nor so complex that their study is impossible"* the study of customers behaviour provides a sound basis for identifying and understanding customers' needs. The study of customers' behaviour is concerned with customers' buying behaviour rather than consumption. It is sometimes easy and sometimes impossible, to predict the behaviour of people. Accurate prediction can yield vast fortunes and inaccurate predictions can result in the loss of millions of rupees. It is a complicated task, filled with uncertainties, risk and surprises. In recent era business around the world recognizes that customer is the king. Knowing why and how people consume products helps manufacturers and marketers to understand how to improve existing products what types of products are needed in the market place or how to attract customers to buy their products. Marketers can justify their existence only when they are able to understand customers wants and satisfy them. For example, if a manager knows through research that fuel mileage is the most important attribute for a certain market, the manufacturer can redesign the product to meet those criteria. A car that satisfies the needs of owners for transportation also obtain psychological satisfaction from the possession of products. For the purpose of this study, the personal variables like gender, age, income, occupation, education, etc., have been selected and the influence of these personal variables on the customers' perception, their buying behaviour and the decision process have been analyzed. The behaviour of customers is affected by various uncontrollable variables also via economic, social, psychological, technical and personal factors. In economic factor we include personal income, family income, standard of living, economic condition. The recent cut down of the growth certain sectors of the vehicle industry have estimate for the auto component sector in 2012-13 is 8-10%.

2. Review of literature

Mandeep Kaur and Sandhu (2006) attempted to find out the important features which a customer considers while going for the purchase of a new car. The study covers the owners of passenger cars living in the major cities of the State of Punjab and the Union Territory of Chandigarh. The respondents perceive that safety and comfort are the most important features of the passenger car followed by luxuriousness. So the manufacturers must design the product giving maximum weight age to these factors.

S. Subadra, Dr. K. M. Murugesan, Dr. R. Ganapathi (2010) examined that demographic factors to understand the buying behaviour by family size, occupation, age, education qualification, life style are the major factors which affect customers behaviours. The study covers the customer's perception of car owners of Namkkal district. Descriptive Statistical tools such as Mean, Median and Standard deviation have been used to describe the profiles of customers, preferred product attributes and level of satisfaction. T-Test, F-Test and ANOVA have been used to test the significant difference between the groups of respondents in their perception and satisfaction for selected independent variables like age, sex and income. Chi-Square test has also been used to test the association between the customer's demographic characteristics and preferred product attributes and satisfaction.

A.M.Elanthiraiyan , Dr.V.Balakrishnan (2012) analyzed that marketers can justify their existence only when they are able to understand customers wants and satisfy them for example if a manager knows through research that fuel mileage is the most important attribute for a certain target market, the manufacturer can redesign the product to meet that criterion. The study covers the car owners of Selam district in Tamilnadu. The demand for the small car segment is increasing because of the growing number of nuclear families, driving comfort, technology etc.

M.S.Vidyarthy (2012) stated that customers lifestyle effect the customers' behaviour of car owners living in chennai. The study comprised factors like pick up, design, mileage, brand, technology, status, lifestyle, grip to consider customer behaviour. It also includes sociological, psychological, personal, technological factors to judge customer behaviour. A Simple Random sampling technique was adopted in the study to select the sample respondents. Data were collected through an interview schedule regarding the perception of the respondents on the usage of Automobiles. Descriptive statistical tools such as Percentage, Mean, Median and Standard deviation have been used to describe the profiles of customers, preferred product attributes and level of satisfaction.

H.S.Adithya (2013) analyzed four major determinants of customers' behaviour, namely cultural, social, economic, personal and psychological. The study covers the customer's perception and behaviour of car owners in Bangalore city. Most of the respondents believe that brand image, celebrity, advertisement, price, discount, satisfaction are most important factors while purchasing a car.

G.Syamala (2013), studied the satisfaction level of customers who own small car. The research covered the areas of Aundh, Pashan, Baner in Pune, Maharashtra. It can be concluded by saying that customers formed happy to purchase and satisfied with small cars. Small Cars have truly gained popularity due its affordability factor and low cost over a period of time.

Nirav R Vyas (2013) analyzed the effect of the profession over buying behaviour towards the car. This covers the impact of country origin of car purchasing decision with different profession. This paper is an attempt to probe into a niche segment of customers and to find out whether the "country of origin" of the brands of cars, make a

significant impact positively or negatively towards the buying behavior of the customers.

3. Objectives

1. To study the customers preference towards small car segment.
2. To identify the major factors influencing the decision to buy a small car
3. To find the important attributes of a car that influences the decision to purchase a small car

4. Research Methodology

4.1 Hypothesis

H_{01}= There is no significant effect of demographic variables of customer on factors influencing buying behaviour.

Reliability and Validity: The response of 23 items selected for respondents generally making an opinion before buying a small car were collected in 5-point likerts scale 1 for strongly agree, 2 for agree, 3 for neutral, 4 for disagree and 5 for strongly disagree. The interactive cronbach's Alpha values for reliability in responses of respondents were found 0.814. The different items in the question contain the questionnaire cover the contents of research significantly.

   Sample Size and Data Collection Method: Non probability convenience cum judgment sampling was used and responses of 165 customers were taken from different areas of Sirsa district. For analysis mean, standard deviation, factor analysis has been applied. For confirmation of descriptive statistic *f*-test statistic is used. To test the appropriateness of factor analysis technique correlation between the variables are checked and Keiser-Meyer-Olkin (KMO) measure of sample adequacy is also used for the same. The population correlation matrix is an identical matrix, is rejected by Bartlett's test of sphericity. The approximate Chi-square value is 1461.911 with 253 degree of freedom, which is significant at 0.05 levels. The value of KMO statistic, 0.763 is also larger than 0.6. Further, a principal component analysis method is used for extraction of variable for the component (factor) concerned. The extraction communalities, averagely for each variable has been found 0.672 which is the amount of variance a variable share with all the other variables being considered. It is also the percentage of variance explained by common factors. Theoretically, sample size is enough to calculate factor analysis. The overall items explained by reproduced correlation matrix in opinion making of buying toward car has shown that 32% non-redundant residuals with absolute values greater than 0.05, representing a satisfactory model fit.

5. Analysis and interpretation

Table 1: Descriptive Statistics.

	Mean	Std. Deviation	Analysis N
To what extent advertisement influence you to buy the car?	4.07	.703	165
To what extent dealer influence you to buy the car?	3.68	.869	165
To what extent family members influence you to buy the car?	4.25	.760	165
To what extent friends influence you to buy the car?	4.05	.731	165
To what extent relatives influence you to buy the car?	3.80	.717	165
To what extent technician council influence you to buy the car?	4.18	.876	165
To what extent color influence you to buy the car?	4.39	.687	165
To what extent discount scheme influence you to buy the car?	4.08	.815	165
To what extent after sale services influence you to buy the car?	4.13	.905	165
To what extent financial facilities influence you to buy the car?	4.01	.991	165
To what extent interiors influence you to buy the car?	4.14	.936	165
To what extent resale value influences you to buy the car?	4.30	.815	165
To what extent space influence you to buy the car?	4.39	.778	165
Services	3.61	1.258	165
Price	3.65	1.109	165
Mileage	3.41	1.168	165
Smooth Ride	3.70	1.217	165
Luxury	3.75	1.213	165
Value for money	3.56	1.095	165
Maintenance	3.61	1.167	165
Looks	3.73	1.185	165
Comfort	3.82	1.231	165
Safety	3.85	1.182	165

Source: Primary (Data Processed Through PASW Statistic18.0)

Table 1 shows descriptive analysis, statistics which give the value of the mean and standard deviation for making an analysis of the total sample size that is 165. If the value comes between (1-1.99) then it comes under 5th position, if the value comes between (2-2.99) then it comes between 4th position, if the value comes between (3-

3.99) then the value comes between 3rd position, if the value comes between (4-4.99) then the value comes between 2nd position and if the value comes between the (5-5.99) then the value comes between 1st position.

Table 2: Correlation matrix.

Reaction Items		V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23
Correlation	V1	1.000	-.041	.114	.254	.247	.108	-.060	.234	.091	.218	.105	.004	.026	.085	.037	.081	.088	.021	-.002	-.064	.086	.027	-.057
	V2	-.041	1.000	-.063	.025	-.016	.171	.131	-.022	-.025	.101	.145	.026	.050	-.079	-.129	-.039	.029	-.032	-.211	-.051	-.029	-.008	-.059
	V3	.114	-.063	1.000	.329	.382	.099	-.002	.251	.237	.087	-.100	.183	-.164	.165	.185	.080	.155	.063	.067	.097	.088	.166	.148
	V4	.254	.025	.329	1.000	.461	.148	.241	.239	.046	.176	.302	.057	.192	.191	.152	.159	.093	.041	.057	.028	-.015	.024	.111
	V5	.247	-.016	.382	.461	1.000	.182	.186	.092	.162	.199	.123	.073	.118	.095	.104	.092	.140	-.011	-.028	-.038	-.080	-.014	.000
	V6	.108	.171	.099	.148	.182	1.000	.208	.056	-.021	.287	.238	-.007	.320	-.030	-.020	.076	-.067	-.083	-.023	-.091	-.151	-.086	-.232
	V7	-.060	.131	-.002	.241	.186	.208	1.000	.191	.086	.086	.388	.123	.340	-.011	-.135	-.088	-.144	-.150	-.108	-.184	-.115	-.121	-.247
	V8	.234	-.022	.251	.239	.092	.056	.191	1.000	.366	.377	.040	.145	.092	-.015	-.047	-.079	-.026	-.102	.054	-.028	-.024	-.022	-.039
	V9	.091	-.025	.237	.046	.162	-.021	.086	.366	1.000	.400	.008	.526	.129	-.012	.010	.020	.092	.020	.165	.103	-.003	-.081	.016
	V10	.218	.101	.087	.176	.199	.287	.086	.377	.400	1.000	.295	.277	.195	-.002	-.085	-.003	.095	.009	.065	-.050	-.053	-.006	-.094
	V11	.105	.145	-.100	.302	.123	.238	.388	.040	.008	.295	1.000	.152	.645	.046	-.136	-.087	-.011	.033	-.048	-.173	-.067	.041	-.074

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23
V12	.004	.026	.183	.057	.073	-.007	.123	.145	.526	.277	.152	1.000	.092	-.117	-.179	-.043	-.019	.039	-.094	-.041	-.135	-.159	-.111
V13	.026	.050	-.164	.192	.118	.320	.340	.092	.129	.195	.645	.092	1.000	.098	-.088	-.067	-.015	.011	.086	-.153	.000	-.010	-.084
V14	.085	-.079	.165	.191	.095	-.030	-.011	-.015	-.012	-.002	.046	-.117	.098	1.000	.565	.541	.527	.505	.530	.481	.465	.517	.538
V15	.037	-.129	.185	.152	.104	-.020	-.135	-.047	.010	-.085	-.136	-.179	-.088	.565	1.000	.431	.481	.427	.521	.413	.402	.431	.527
V16	.081	-.039	.080	.159	.092	.076	-.088	-.079	.020	-.003	-.087	-.043	-.067	.541	.431	1.000	.379	.357	.459	.416	.224	.353	.345
V17	.088	.029	.155	.093	.140	-.067	-.144	-.026	.092	.095	-.011	-.019	-.015	.527	.481	.379	1.000	.621	.440	.393	.582	.561	.616
V18	.021	-.032	.063	.041	-.011	-.083	-.150	-.102	.020	.009	.033	.039	.011	.505	.427	.357	.621	1.000	.485	.395	.552	.602	.521
V19	-.002	-.211	.067	.057	-.028	-.023	-.108	.054	.165	.065	-.048	-.094	.086	.530	.521	.459	.440	.485	1.000	.483	.380	.371	.448
V20	-.064	-.051	.097	.028	-.038	-.091	-.184	-.028	.103	-.050	-.173	-.041	-.153	.481	.413	.316	.393	.395	.483	1.000	.308	.405	.399
V21	.086	-.029	.088	-.015	-.080	-.151	-.115	-.024	-.003	-.053	-.067	-.135	.000	.465	.402	.224	.582	.552	.380	.308	1.000	.706	.585
V22	.027	-.008	.166	.024	-.014	-.086	-.121	-.022	-.081	-.006	.041	-.159	-.010	.517	.431	.353	.561	.602	.371	.405	.706	1.000	.664
V23	-.057	-.059	.148	.111	.000	-.232	-.247	-.039	.016	-.094	-.074	-.111	-.084	.538	.527	.345	.616	.521	.448	.399	.585	.664	1.000

Source: Data Processed Through PASW Statistic 18

Table 2 shows the correlation matrix which tells about the correlation with each variable. The interior portion of the table contains correlation coefficient for all pairs of variables. The values along the diagonal, which represent associations between each variable and itself, equal +1.000. This diagonal also serves as a line of symmetry. Correlation matrix contains the correlation coefficient as well as significant values and

sample size for the data used to analyze each pair of variables. This table gives the correlation between the original variables. Before conducting a principle components analysis, we want to check the correlation between the variables. There should be at least 3 items which show the value above than 0.3. There are 23 variables in this table and 14 variables that have value above than 0.4, so this table fulfill the condition.

Table 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.763
Bartlett's Test of Sphericity	Approx. Chi-Square	1461.911
	Df	253
	Sig.	.000

Source: Data processed through PASW statistics 18 version

Table 3 shows the value of KMO (Keiser-Meyer-Olkin) and barlett's test. To test the appropriateness of factor analysis techniques correlation between the variables Keiser-Meyer-Olkin (KMO) measure of sample adequacy is used for the same. The population correlation matrix is an identity matrix, which is rejected by the Bartlett's test of sphericity. The approximate Chi-square value is 1461.911 with 253 degree of freedom, which is significant at 0.05 level of significance. The value of KMO statistic is 0.763 which is more than 0.6.

Table 4: Communalities.

	Initial	Extraction
To what extent advertisements influence you to buy the car?	1.000	.680
To what extent dealer influence you to buy the car?	1.000	.746
To what extent family members influence you to buy the car?	1.000	.665
To what extent friends influence you to buy the car?	1.000	.653
To what extent relatives influence you to buy the car?	1.000	.622
To what extent technician council influence you to buy the car?	1.000	.633
To what extent color influence you while purchasing a car?	1.000	.551
To what extent discount scheme influence you while purchasing a car?	1.000	.516
To what extent after sale service influence you while purchasing a car?	1.000	.768
To what extent finance facility influences you while purchasing a car?	1.000	.683
To what extent interior influence you while purchasing a car?	1.000	.752
To what extent resale value influences you while purchasing a car?	1.000	.678

To what extent space influence you while purchasing a car?	1.000	.760
Services	1.000	.683
Price	1.000	.608
Mileage	1.000	.635
Smooth Ride	1.000	.674
Luxury	1.000	.668
Value for money	1.000	.723
Maintenance	1.000	.570
Looks	1.000	.762
Comfort	1.000	.734
Safety	1.000	.701

Source: Data processed through PASW statistics 18
Extraction Method: Principal Component Analysis.

Table 4 shows the communalities matrix which shows each variable share variation with each other. Communalities are for correlation analyses the portion of variance accounted for in each variable by the rest of variables. This is the proportion of each variable's variance that can be explained by the principal components extraction communalities for each variable is also calculated which give the average of each variable has been found.672 which is the amount of variance a variable share with all the variables being considered. They are reproduced variances from the number of components that we have saved.

Table 5: Total Variance Explained.

Component		Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
		Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	1	5.476	23.810	23.810	5.476	23.810	23.810	3.993	17.359	17.359
	2	3.065	13.327	37.137	3.065	13.327	37.137	2.635	11.456	28.815
	3	1.916	8.331	45.468	1.916	8.331	45.468	2.247	9.768	38.583
	4	1.569	6.822	52.290	1.569	6.822	52.290	1.942	8.442	47.025
	5	1.232	5.356	57.646	1.232	5.356	57.646	1.924	8.365	55.390
	6	1.108	4.816	62.462	1.108	4.816	62.462	1.483	6.447	61.836

	7	1.098	4.773	67.236	1.098	4.773	67.236	1.242	5.399	67.236
	8	.926	4.027	71.262						
	9	.808	3.512	74.775						
	10	.684	2.975	77.749						
	11	.638	2.775	80.524						
	12	.569	2.473	82.997						
	13	.547	2.378	85.375						
	14	.498	2.164	87.539						
	15	.458	1.993	89.532						
	16	.417	1.811	91.343						
	17	.389	1.692	93.036						
	18	.354	1.538	94.573						
	19	.342	1.487	96.061						
	20	.297	1.290	97.351						
	21	.247	1.073	98.424						
	22	.188	.819	99.243						
	23	.174	.757	100.000						

Extraction Method: Principal Component Analysis.
Source: Data Processed Through PASW Statistic 18

Table no 5 shows the total variance explained table Eigen values are the variance of the principal components .It shows that Eigen value greater than 1.0 (default option) result in 7 factors being extracted. From the cumulative percentage of variance accounted for 67.236 of the total variance by these 7 extracted factors. The first component accounts for the most variance and have the highest Eigen value, and the second component account for the next variance factor and so on.
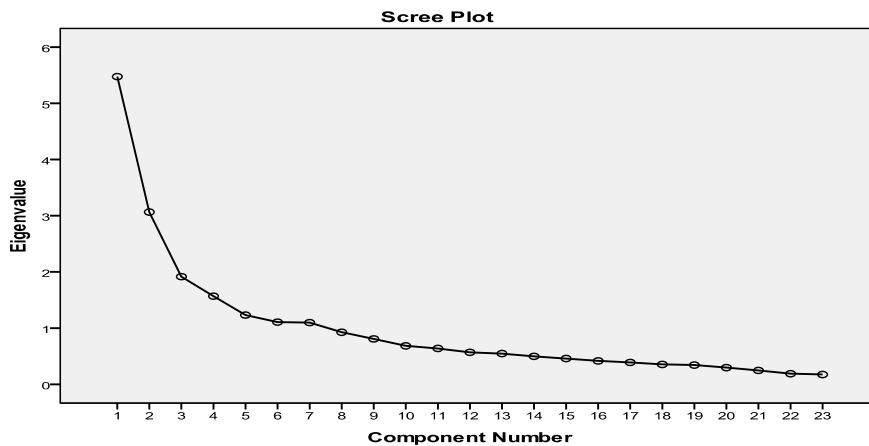

Chart 1

The scree plot shows the distinct break occur at 7 factors. It shows component numbers on x-axis and Eigen value on y-axis .In chart till variable 7 the Eigen value is greater than 1 and after the 7th variable the line is almost goes flat. Components with Eigen value greater than 1 show high variance and Eigen value less than 1 show less variance.

Table 6: Component Pattern Matrix[a]

React ion items	Component Matrix							Rotated Component Matrix						
	1	**2**	**3**	**4**	**5**	**6**	**7**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
V1	.058	.363	-.162	-.273	.270	-.605	.075	.061	-.044	-.033	-.103	.214	.785	-.027
V2	-.118	.119	.261	.093	.324	.319	.659	.080	-.182	.047	.031	.001	-.094	.833
V3	.211	.357	-.508	-.323	.181	.311	-.033	.133	.036	-.244	.265	.718	.037	-.008
V4	.125	.602	.003	-.474	.058	.128	-.175	.040	.095	.304	-.033	.720	.169	-.030
V5	.052	.545	-.165	-.496	.084	.204	-.035	-.044	.062	.111	.037	.760	.142	.072
V6	-.140	.439	.280	-.202	-.211	-.106	.495	-.289	.272	.317	-.083	.117	.287	.521
V7	-.236	.472	.329	-.013	-.095	.319	-.231	-.162	-.096	.623	.112	.279	-.190	.039
V8	-.049	.494	-.374	.114	.098	-.297	-.137	-.022	-.082	.063	.418	.193	.507	-.189
V9	.035	.482	-.518	.489	-.145	.073	-.018	-.010	.106	.014	.850	.071	.151	-.078
V10	-.043	.628	-.143	.290	.034	-.302	.299	-.023	.062	.214	.481	.004	.574	.268
V11	-.116	.576	.595	.150	.061	.005	-.163	.068	-.125	.837	.030	.053	.102	.128
V12	-.143	.399	-.355	.502	-.038	.345	.000	-.058	-.101	.089	.794	.082	-.120	.075
V13	-.084	.537	.582	.214	-.151	-.084	-.223	-.002	.034	.860	.061	-.066	.103	-.003
V14	.769	.151	.140	-.108	-.186	.016	-.043	.519	.598	.126	-.088	.162	-.005	-.079
V15	.720	.006	-.037	-.220	-.199	.011	-.021	.421	.589	-.103	-.129	.200	-.019	-.130

V16	.596	.080	.001	-.179	-.413	.017	.265	.195	.751	-.067	-.058	.112	.003	.115
V17	.771	.122	.020	.096	.201	.045	.110	.738	.309	-.045	.072	.100	.065	.112
V18	.758	.029	.132	.224	.149	.033	.023	.755	.295	.038	.057	-.066	-.022	.037
V19	.687	.086	-.011	.125	-.437	-.177	-.077	.348	.712	.071	.102	-.107	.078	-.250
V20	.633	-.077	-.138	.067	-.323	.096	.163	.324	.627	-.201	.119	-.028	-.128	.002
V21	.735	-.054	.128	.180	.393	-.081	-.093	.860	.072	-.022	-.059	-.066	.074	-.057
V22	.773	-.005	.170	.076	.319	.004	-.011	.829	.184	.003	-.102	.029	.025	.035
V23	.793	-.075	.005	.052	.195	.102	-.123	.768	.255	-.108	-.027	.091	-.101	-.120

Source: Data Processed through PASW statistics 18
Extraction Method: Principal Component Analysis
a) 7 components extracted.
b) Rotation method: varimax with Kaiser normalization

Table no. 6 shows the component pattern matrix.It shows the coefficient used to express the standardized variable in the term of factors. These coefficients represent the correlation between the factors and variables. The component matrix shows the relationship between factors and variable.The correlation possible values range from -1 to +1. The rotated component matrix is used for interpreting factors. Each factor composed of that variable loaded 0.30 or higher loading on that factor.In case where two variable are loaded 0.30 or higher than 0.30 the highest loading is taken on that factor by ignoring the minus and plus sign. The purpose of the rotation is to make things easier for the structure of the analysis, so that each factor will have nonzero loadings for only some of the variables without affecting the communalities and the percentage of variance explained.

Table 7: Reproduced Correlations.

Reaction items		V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23
Reproduced Corre	V1	.680a	-.088	.170	.280	.260	.205	-.128	.402	.042	.384	.067	-.162	.031	.044	.048	.010	.095	-.006	.022	-.120	.102	.078	-.014

lation																							
V2	-.088	.746a	-.009	-.042	.039	.347	.087	-.176	-.072	.182	.166	.117	.023	-.129	-.189	-.030	.090	.043	-.310	-.080	-.002	.057	-.082
V3	.170	-.009	.665a	.449	.529	-.037	.045	.249	.281	.097	-.151	.231	-.236	.153	.212	.134	.212	.068	.009	.121	.062	.110	.193
V4	.280	-.042	.449	.653a	.606	.231	.338	.228	.065	.146	.296	.025	.233	.237	.191	.139	.122	.015	.043	-.035	.003	.078	.075
V5	.260	.039	.529	.606	.622a	.229	.262	.224	.110	.151	.147	.086	.064	.142	.142	.122	.077	-.060	-.048	-.033	-.082	-.001	.015
V6	.205	.347	-.037	.231	.229	.633a	.207	.039	-.023	.357	.312	-.034	.298	.036	-.033	.205	-.061	-.125	-.013	-.036	-.247	-.151	-.266
V7	-.128	.087	.045	.338	.262	.207	.551a	.048	.084	.087	.526	.212	.501	-.030	-.149	-.117	-.150	-.134	-.124	-.208	-.201	-.157	-.180
V8	.402	-.176	.249	.228	.224	.039	.048	.516a	.452	.451	.112	.287	.117	-.045	-.064	-.093	.017	-.046	.047	-.092	-.015	-.064	-.067
V9	.042	-.072	.281	.065	.110	-.023	.084	.452	.768a	.485	.033	.647	.079	.003	-.031	.027	.094	.062	.184	.140	-.040	-.072	-.004
V10	.384	.182	.097	.146	.151	.357	.087	.451	.485	.683a	.277	.348	.273	-.014	-.103	.032	.094	.033	.077	-.028	-.022	-.032	-.128
V11	.067	.166	-.151	.296	.147	.312	.526	.112	.033	.277	.752a	.109	.724	.061	-.144	-.118	.002	.047	-.033	-.236	.026	.041	-.092
V12	-.162	.117	.231	.025	.086	-.034	.212	.287	.647	.348	.109	.678a	.104	-.141	-.187	-.122	-.012	-.025	-.042	.007	-.125	-.145	-.091
V13	.031	.023	-.236	.233	.064	.298	.501	.117	.079	.273	.724	.104	.760a	.112	-.092	-.044	-.025	.047	.107	-.156	-.009	.001	-.103

V14	.044	-.129	.153	.237	.142	.036	-.030	-.045	.003	-.014	.061	-.141	.112	.683a	.611	.556	.563	.554	.608	.503	.485	.551	.565
V15	.048	-.189	.212	.191	.142	-.033	-.149	-.064	-.031	-.103	-.144	-.187	-.092	.611	.608a	.546	.492	.462	.555	.507	.407	.470	.524
V16	.010	-.030	.134	.139	.122	.205	-.117	-.093	.027	.032	-.118	-.122	-.044	.556	.546	.635a	.399	.359	.551	.537	.213	.312	.346
V17	.095	.090	.212	.122	.077	-.061	-.150	.017	.094	.094	.002	-.012	-.025	.563	.492	.399	.674a	.647	.448	.440	.646	.670	.638
V18	-.006	.043	.068	.015	-.060	-.125	-.134	-.046	.062	.033	.047	-.025	.047	.554	.462	.359	.647	.668a	.477	.433	.667	.673	.641
V19	.022	-.310	.009	.043	-.048	-.013	-.124	.047	.184	.077	-.033	-.042	.107	.608	.555	.551	.448	.477	.723a	.550	.371	.399	.451
V20	-.120	-.080	.121	-.035	-.033	-.036	-.208	-.092	.140	-.028	-.236	.007	-.156	.503	.507	.537	.440	.433	.550	.570a	.314	.367	.437
V21	.102	-.002	.062	.003	-.082	-.247	-.201	-.015	-.040	-.022	.026	-.125	-.009	.485	.407	.213	.646	.667	.371	.314	.762a	.730	.677
V22	.078	.057	.110	.078	-.001	-.151	-.157	-.064	-.072	-.032	.041	-.145	.001	.551	.470	.312	.670	.673	.399	.367	.730	.734a	.682
V23	-.014	-.082	.193	.075	.015	-.266	-.180	-.067	-.004	-.128	-.092	-.091	-.103	.565	.524	.346	.638	.641	.451	.437	.677	.682	.701a

Source: Data Processed Through PASW Statistics 18
Extraction Method: Principal Component Analysis.
a) Reproduced communalities
b) Residuals are computed between observed and reproduced correlation. There are 81 (32.0%) non redundant residuals with absolute values greater than .05.

Table 7 shows the reproduced correlation which contains two items i.e the difference between the reproduced correlation matrix and the original correlation matrix is the residual matrix. The reproduced correlation matrix is the correlation matrix based on the extracted components. The reproduced correlation matrix of overall items extracts factors affecting buying behaviour which has shown 81(32%) non redundant residuals with absolute values greater than 0.05, indicating a satisfactory making the model fit

Table 8: Overall item variation explained in factor wise.

Factors	Factors interpretation (% of variance explained)	Coefficient value	Variable	Factor Items
F 1	Personal desire (23.810)	.738	V17	Smooth ride (v17)
		.755	V18	Luxury (v18)
		.860	V21	Looks (v21)
		.829	V22	Comfort (v22)
		.768	V23	Safety (v23)
F 2	Technical and Financial view (13.327)	.598	V14	Services (v14)
		.589	V15	Price (v15)
		.751	V16	Mileage (v16)
		.712	V19	Value for money (v19)
		.627	V20	Maintenance (v20)
F 3	Psychological (8.331)	.623	V7	Color (v7)
		.835	V11	Interior (v11)
		.860	V13	Space (v13)
F 4	After showroom variability(6.822)	.850	V9	After sale services(v9)
		.794	V12	Resale value(v12)
F 5	Reference group(5.356)	.718	V3	Family members(v3)
		.720	V4	Friends(v4)
		.760	V5	Relatives(v5)
F 6	Promotional (4.816)	.785	V1	Advertisement (v1)
		.507	V8	Discount schemes (v8)
		.574	V10	loan facility(v10)
F 7	Counseling (4.773)	.833	V2	Dealer(v2)
		.521	V6	Technician council(v6)

Source: Data Processed Through PASW Statistic 18

Table 9: Overall confirmation of factors affecting buying behaviour by demographic variable.

Factors	Mean	Confirmatory Statistics									
		Gender		Age		Education		Occupation		Monthly Income	
		f-value	S-value	f-value	S-value	f-value	S-value	f-value	S-value	f-value	S-value
1. Personal desire	3.77	.057	.812	1.483	.221	1.733	1.62	2.118	.100	1.556	.202
• Smooth ride	3.70	.055	.815	2.025	.113	1.577	.197	.743	.528	.714	.545
• Luxury	3.75	.044	.835	.213	.887	.784	.504	1.352	.260	1.466	.226
• Looks	3.73	.543	.462	1.768	.155	.521	.668	1.509	.214	2.331	.706
• Comfort	3.82	1.955	.164	.192	.902	1.914	.129	1.433	.235	1.525	.210
• Safety	3.85	.586	.445	2.478	.063	2.131	.098	3.301	.022*	.962	.412
2. Technical and financial Facets	3.57	3.500	.063	1.346	.261	3.439	.018*	.317	.813	.525	.666
• Services	3.61	3.454	.065	.924	.431	3.737	.012*	.190	.903	.304	.822
• Price	3.65	3.750	.055	3.336	.021*	2.470	.064	1.248	.294	1.833	.143
• Mileage	3.41	.239	.626	1.821	.145	5.343	.002*	.563	.640	.476	.700
• Value for money	3.56	2.767	.098	1.046	.374	1.063	.366	.041	.989	.567	.637
• Maintenance	3.61	1.281	.259	.984	.402	1.419	.239	1.228	.301	1.283	.282
3. Psychological	4.30	.031	.860	1.322	.269	1.501	.216	1.727	.164	1.052	.371
• Color	4.39	.104	.747	3.349	.021*	.832	.478	2.098	.103	.586	.625
• Interior	4.14	.969	.326	.900	.443	1.574	.198	.916	.435	.638	.592
• Space	4.39	.120	.729	1.527	.210	1.698	.170	3.539	.016*	2.539	.058

4. After showroom variability	4.215	1.968	.163	1.299	.277	2.649	.051	1.458	.228	5.249	.002*
• After sale services	4.13	.003	.958	.245	.864	3.845	.011*	.156	.926	3.529	.016*
• Resale value	4.30	6.441	.012*	2.354	.074	1.625	.186	4.056	.008*	4.557	.004*
5. Reference group	4.03	3.294	.071	2.811	.041*	.218	.884	2.597	.054	1.484	.221
• Family	4.25	12.41	.001*	1.133	.338	.801	.495	2.534	.059	3.639	.014*
• Friends	4.05	.002	.965	3.205	.025*	.688	.561	.592	.621	2.171	.094
• Relatives	3.80	.950	.331	1.243	.296	.526	.665	2.217	.088	.488	.691
6. Promotional	4.05	.342	.560	5.657	.001*	.169	.917	1.659	.178	4.189	.007*
• Advertising	4.07	8.193	.005*	5.684	.001*	5.468	.001*	2.088	.104	2.738	.045*
• Discount scheme	4.08	1.238	.267	5.964	.001*	.894	.446	.270	.847	2.183	.092
• Finance facility	4.01	.002	.962	1.213	.307	.694	.557	1.620	.187	5.620	.001*
7. Counseling	3.93	.037	.848	.974	.407	2.888	.037*	3.549	.016*	3.450	.018*
• Dealer	3.68	.261	.610	.173	.915	3.221	.024*	3.529	.016*	3.779	.012*
• Technician council	4.18	.047	.828	1.276	.284	1.281	.283	1.511	.214	8.284	.000*

Source: Primary (Data Processed Through PASW 18 Version)

Table 9 shows the ANOVA value and the significance value of demographic variable such as gender, age, education, occupation and monthly. Factor 1 (personal desire) has no significant effect on demographic variables, however, occupation have effects on personal desire specially on safety. Factor 2 (Technical and financial facets) is affected by education variable and in factor 2 variable service and mileage is affected by education and price is affected by age. Factor 3 (psychological) factor has no effect on demographic variable, but age has an effect on color and occupation has an effect on space. Factor 4 (after showroom variability) has the effect of monthly, income and education. In factor 4 educations have an effect on after sale services, Gender, occupation and monthly income have a significant effect on resale value. Age has a significant effect on reference group. In factor 5 Gender and monthly income

have a significant effect on family and age has an effect on friends. Age and monthly income have a significant effect on promotional variables (factor 6). Wherever gender, age, education, monthly income has significant effect on advertising and Age has a significant effect on discount scheme, Monthly income has a significant effect on finance facility. Education, occupation, monthly income has significant effect on counseling. In factor 7 dealers have significant effect on education, occupation and Monthly income have a significant effect on technician counselling.

6. Conclusion and Suggestions

Customer behaviour consists all dimensions of human behaviour that helps in making purchase decision .An understanding of the customers behaviour enables a marketer to take marketing decisions which are compatible with its customers needs, There are four major dimensions of customers behaviour namely, cultural, socio-economic, personal and psychological. The demographic determinants of customers' behaviour consist of gender, age, educational qualification, occupation, monthly income. Factor 1(personal desire) and factor 2(technical and financial facets) has mean to identify customer behaviour with value (3.77) and (3.57) which is less effective in comparison with factor 3(psychological) and factor 4 (after showroom variability) which have highest mean value that is (4.30) and (4.215) are more effective. According to this study monthly income is variable that affects the customer behaviour regarding buying a small car and age, education and occupation have comparatively but less effect on customer behaviour.

Suggestions: It is recommended on the basis of the study that the price of the car should be at par or slightly lower so that the customers may purchase a car instead of using van or taxi and further vehicle manufacturers should improve the knowledge of customers about the operations and maintenance of vehicles.

7. Further area of Research

The study has covered and analyzed 165 questionnaires for taking the customers view about the various questions along with variables. This study covered the district of Sirsa only . It may be extended with more items and more question in other districts of the state to have understood the customers' behaviour regarding small cars.

References

[1] A.M.Elanthiraiyan, V. (2012). Customers Perceptions and Behaviour: A Study with Special Reference to Car Owners in Salem District of Tamilnadu. *International Journal of Management Research and Review , 2* (12), 2026-2039.

[2]   Adhitaya, H. S. (2013). customers perception and behaviour of car owner - An empirical study in banglore district. *GRA-Global Research Analyse* , 104-107.

[3]   Balakrishnan Menon, J. R. (2012). Dominant Mean Percentage Score Factors of The Customers Purchase Behaviour of Passenger Cars. *International Journal of Research in IT & Management , 2* (5), 13-36.

[4]   G. Rama Krishna, D. P. (2012). Customers Behaviour Towards Small Cars - A Case Study of Nalgonda District in A. P. *International Journal of Research in Computer Application & Management , 2* (1), 67-77.

[5]   Joshi, S. P. (2013). Customers Behavior for Small Cars: An Empirical Study. *International Monthly Refereed Journal of Research In Management & Technology , II*, 47-52.

[6]   K.Vidyavathi. (2012). Customers Lifestyle Influence of Customers Behaviour With Reference To Automobile Industry In Chennai. *International Journal of Multidisciplinary Research , 2* (4), 37-50.

[7]   M.Suresh, R. (2012). Customerss Attitudes Towards Car in INDIA Some Realities. *Global Research Analysis , 1* (7), 16-17.

[8]   Nirav.R.Vyas, V. V. (2013). An Analysis of buying behavior of doctors towards MNC vis a vis Domestic brand of cars - With special reference to Rajkot & Jamnagar . *Paripax-Indian Journal of AppliedResearch , 3* (7), 92-93.

[9]   Pachauri, M. (2002). Customers behaviour: A literature review. *The Marketing Review , 2* (2), 319-355.

[10]   Phadtare, A. M. (2013). A Study Of Imc Mix & Customers Buying Behavior With Special Reference To Small Car Segment In Satara District. *Indian Streams Research Journal , 3* (7), 1-6.

[11]   S. Subadra, K. M. (2010). Customers Perceptions and Behaviour: A Study with Special Reference to Car Owners in Namakkal District. *Sri Krishna International Research & Educational Consortium (APJRBM) , 1* (3), 37-60.

[12]   S.Jabaseeli Nanleena, A. (2012). A Study on Customers Perception of Tata Ltd. *International Journal of Research in Computer Application & Management , 2* (12), 1-16.

[13]   Sakshi Modi, T. J. (2012). Customers Buying Behaviour: Changing Shopping Patterns. *International journal of Business Management Economic Research , 3* (3), 527-530.

[14]   Shende, V. (2014). Analysis of Research in Customers Behaviour of Automobile Passenger Car Customer. *International Journal of Scientific and Research Publications , 4* (2), 1-8.

[15]   Shriram, S. (2010). A Study on Customers Buying Behaviour for Car users in Pune City. *National Monthly Reffered Journal of Research in Commerce and Management , 1* (9), 29-34.

[16]   Syamala, G. (2013). Satisfaction of Small Car Owners in Select Areas of Aundh, Baner and Pashan in Pune City. *International Journal of Research in Computer Application & Management , 3* (2), 133-138.

[17] Thamarai Selvi N, N. V. (2012). A Study on the Indian Small Car Market And Factors Influencing Customers' Decisions towards Purchase of Small Cars'. *International Journal of Research in Computer Application & Management ,* *2* (11), 65-70.