A TYPOLOGY OF PROMOTIONAL STRATEGIES AMONG PURCHASERS OF NEW CARS: A FACTOR ANALYTIC APPROACH

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Abstract

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. Perception towards promotional strategies among car buyers has been studied and data of both urban and rural buyers is taken to fulfill the present objective. Reliability test and Factor analysis has been applied on the data of 477 respondents from Punjab region. Eight factors have been extracted out of which "Pricing Influence" is the most important one. It is recommended that marketers should come up with new strategies and try to focus on the extracted factors the most in order to increase their market share.

Introduction

Modern marketing calls for more than developing a good product, pricing it attractively and making it accessible to target customers. Companies must also communicate with present and potential stakeholders and with the general public (Kotler & Keller, 2009). Our world is characterized by intensive promotion wars fought in the media and retail shelves. If the communication is made with the help of promotional tools then that becomes effective for the customers. This paper presents and validates comprehensive model to explain perception regarding promotional strategies adopted by urban consumers and their rural counterparts while purchasing new cars.

Review of Literature

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. 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.

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 perception towards promotional strategies followed by different product manufacturers but there is hardly any study on cars and moreover we have covered rural segment in our study also as 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 perception of both urban and rural people towards promotional activities. Accordingly they would be able to form different strategies for marketing their cars and penetrating into the rural cadre. Hence the thrust of this proposed study will be on analyzing consumer behaviour towards promotional activities.

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 and nearby villages to these cities. 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 so sample from both urban and rural areas are taken. Five point scale has been used for the said purpose ranging from strongly agree to strongly disagree. To find out the perception regarding promotional strategies adopted by different car manufacturers, Factor Analysis was applied on set of 27 statements. The survey was conducted during the period of January 2011 to July 2011. 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).

Reliability Test

Before applying any test or technique, it is very important to test the reliability of the data. There are twenty seven statements that are framed to analyze the present problem. Cronbach's alpha has been used to test the reliability using SPSS 11.5. Value of alpha came out to be 0.8472 which is a pretty good figure.

Factor Analysis

Exploratory factor analysis was conducted on twenty seven statements to explore the perceptions of urban and their rural counterparts. Total of 477 respondents were taken in the study (239 from urban area and 238 from rural area).

Data Adequacy Test for Factor Analysis:

After the reliability test, the next step is to see whether data is adequate for factor analysis or not. Hence data adequacy tests were carried out on the data so collected and following tests are considered:

1. The Correlation Matrix was computed and analyzed. The correlation matrix should ensure that there are sufficient correlations to justify the application of factor analysis (Hair et.al 2011) and matrix revealed that there are enough correlations to go ahead with factor analysis.
2. Anti-Image Matrix: It is just negative value of partial correlation. Larger partial correlation or anti image correlation are indicative of a data matrix perhaps not suited to Factor analysis (Hair et.al 2011). In our matrix, correlations are very low; hence our data is ready to be used for factor analysis.
3. Kaiser-Meyer Olkin Measure of Sampling Adequacy (MSA): Measure of sampling adequacy for each variable was observed from the diagonal elements of anti image correlation matrix. These show low partial correlations, indicating existence of true factors in the data. The measures can be interpreted as 0.90 or above (above marvelous), 0.8 or above (meritorious), 0.7 or above (above middling), 0.6 or above (mediocre), 0.5 or above (miserable), 0.5 or below (unacceptable) (Hair et.al 2011). Overall measure of sampling adequacy was computed and found to be 0.845 which is a pretty good figure (Hair et.al 2011).
4. Bartlett's Test of Sphericity: It provides the statistical significance that the correlation matrix has significant correlations among variables. Increasing the sample size causes the Bartlett's test to become more sensitive in detecting correlations among the variables (Hair et.al 2011). The value of Bartlett's test is found to be significant indicating that correlation matrix is not an identity matrix and value of chi square is also significant. Hence all these standards indicate that data is appropriate for factor analysis.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.845
Bartlett's Test of Sphericity	Approx. Chi-Square	2789.274
	Df	351
	Sig.	.000

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 (ie. Eigen Value>1). The percentage of variance explained by eight factors is 9.219%, 8.861%, 7.287%, 6.980%, 6.346, 6.323, 6.078 and 4.876 respectively. Communalities are the proportion of variance in any one of original variable which is being captured by the extracted factors (Nargundkar, 2010). Larger communalities indicate that a large number of variance has been accounted by the factor solution.

Rotated Component Matrix

	Component								
Variables	1	2	3	4	5	6	7	8	Communalities
V1	**.761**	.020	-.108	.020	.014	.016	.116	.084	.612
V2	**.779**	-.003	-.016	-.005	.242	-.067	.044	.090	.680
V3	**.694**	.202	.097	.138	-.049	.064	.160	-.060	.587
V4	**.623**	.270	.282	.049	-.088	.181	-.018	-.100	.594
V5	.191	-.166	.107	.089	-.168	**.598**	.360	.032	.600
V5	.007	-.161	**.680**	.096	.298	-.008	.057	-.055	.592
V6	.326	.159	.163	**.627**	-.038	.003	.038	-.034	.555
V7	.093	.100	**.672**	.231	-.071	.032	-.096	.088	.547
V8	.267	.309	..170	**.401**	-.075	.271	.199	.188	.509
V9	-.014	.139	**.614**	-.021	.082	.142	.194	.370	.599
V10	.098	.055	-.014	.369	-.150	.030	**.579**	-.012	.508
V11	.124	.461	.176	.054	-.104	.166	.143	**.564**	.639
V12	1.715 E-05	.001	.082	.281	.177	.149	-.004	**.682**	.605
V13	.258	**.615**	.053	.153	-.010	.249	-.015	.023	.533
V14	.103	.020	.042	.147	**.631**	.112	.315	.010	.544
V15	.076	.374	.151	.138	.073	**.546**	.011	.113	.504
V16	.186	.118	-.079	-.054	.155	.087	**.653**	.268	.588
V17	.088	**.539**	-.292	-.036	.018	-.077	.205	.223	.482
V18	-.022	.147	.244	.007	**.687**	-.016	-.178	.151	.608
V19	-.094	.146	-.036	.074	.186	**.746**	.000	.182	.661
V20	.094	**.635**	.099	.110	.163	.098	.116	-.006	.483
V21	.160	.326	.119	.161	.371	**.401**	.062	-.242	.527
V22	.055	.402	.164	.009	.134	.101	**.621**	-.155	.629
V23	-.081	.078	.119	**.621**	.099	.149	.057	.141	.468
V24	-.042	**.490**	.144	.420	.141	-.020	.129	.093	.484
V25	.032	.041	.030	**.579**	.435	.117	.020	.120	.557
V26	.068	.272	**.452**	.113	.330	.097	-.018	-.043	.416
Eigen Values	5.614	2.223	1.642	1.279	1.2	1.098	1.034	1.002	
% of Variance	9.219	8.861	7.287	6.980	6.346	6.323	6.078	4.876	

*Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 11 iterations.
**bold values represents highest loadings.

Criteria for the Significance of Factor Loadings

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 we 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 eight factors has been assigned suitable names summarized in table below:

Factor Number	Name of Dimension	Statements	Factor Loadings
F1	Pricing Influence	• Installment Purchase Facility is the most important Consideration	0.779
		• 0% interest facility tempted me to buy a car	0.761
		• Off-Season Discounts or End of Year Discounts are important for me.	0.694
		• I am attracted by Festival Offers such as Diwali schemes	0.623
F2	Local Advertisement	• Wall writings serve as an input to my decision making process.	.635
		• Local brand ambassador do influences my decision making.	.615
		• Telemarketing is very effective to masses.	.539
		• Presentations by company associate catches attention.	.490
F3	Preliminary Informational Tool	• It is important for a company to provide free and better After Sales Services	.680
		• Free Test Drives are vital for buyers	.627
		• Brochures act as an informational tool for customers.	.672
		• Catalogues provides all the latest and necessary information to prospective buyers.	.614
F4	Visual Display	• Exchange Offers promote new purchases.	.452
		• Fairs/ melas are an effective tool in attracting a large number of customers.	.621

Factor Number	Name of Dimension	Statements	Factor Loadings
F5	Advertisement	• Exhibitions/ road shows lure a large number of customers. • Modern promotional tools such as Scratch Cards are effective. • TV Advertisements have a great visual appeal	.579 .401 .687
	Effectiveness	• Newspapers advertisements provide current information about the cars.	.631
F6	Web Marketing and Incentives	• WebPages/ web sites provide required information to customers. • Free Gift Schemes does not act as strong motivators to me. • Online Discussion/ Chat Group help the customer in knowing the product. • Celebrity Endorsement carries weight in the eyes of customer.	.746 .598 .546 .401
F7	Traditional Promotional Tools	• Radio Announcements are not strong advertisement tools now days. • Posters / printed displays are older promotional tools. • Direct Mails (Customized) are not effective now days.	.653 .621 .579
F8	Print Media	• Magazine Ads are instant eye catchers. • Regular E-mails send by company helps in increasing sales.	.682 .564

Explanation to the Table

Factor 1- Pricing Influence- This factor accounts for 9.219% of the variance. The most important dimension in this factor is "Installment Purchase Facility is the most important consideration" with maximum factor loading of .779. The second important dimension "0% interest facility" has the factor loading of..761. "Off Season Discounts and festival offers" also come under same construct which have the factor loading of .694 and .623 respectively. These all promotional strategies are related with monetary benefits. This may be due to the fact that monetary benefits are the most influential for both urban and rural customer. Motivation in the form of money is considered the best. Therefore, it is the most important factor in determining behavior towards promotional strategies of companies.

Factor 2- local Advertisement - It accounts for 8.861% of the variance. Most important dimension in this construct is "wall writings serve as an input to my decision making process with factor loading of

.635. The next dimensions related with this construct are local brand ambassador (.615), telemarketing is very effective (.539) and presentation by company associate (.490). These all variables are related with local advertisements that are mostly prevailing in rural areas. Rural people are more influenced by local brand ambassadors than celebrity one and concept of wall writing is very famous in these regions.

Factor 3- Preliminary Informational Tool – It accounts for 7.287% of the variance. The most important dimension in this construct is "Free and Better after Sales Service" (.680). The next important variables are related with "Free Test Drives" (.672), "Brochures" (.614) and "Catalogues" (.452). These all variables account for preliminary information which is provided to customers when they search for cars. These all variables act as effective promotional tools for the company.

Factor 4 – Visual Display- This factor accounts for 6.980% of the variance. The important dimensions in this factor are "Exchange Offers" (.627), "Fairs & Melas" (.621) Exhibitions and Road Shows" (.58) & "Modern Promotional Tools" (.401).

All car companies are trying to visually display their products (cars) in order to attract more and more products. They are organizing Road Shows, Melas and Exhibition just to show their product in a better way.

Factor 5 – Advertisement Effectiveness- This factor accounts for 6.346% of the variance. Important dimensions in this construct are "TV Advertisements have a great Visual Appeal" (.687) and "Newspaper Advertisements provide Current Information about the Cars" (.631). Now day's car companies are focusing more on advertisements than any other promotional medium as it is very effective in the competitive environment.

Factor 6 – Web Marketing and Incentives – It accounts for 6.323% of the variance. The dimensions in this construct are "Web Pages / Websites provide required Information to Customers" (.746), "Free Gift Schemes does not act as Strong Motivators to Me" (.598), "Online Discussions" (.546) and "Celebrity Endorsement" (.401). People tend to be influenced by incentives and also people prefer web marketing as they are more influenced by technology.

Factor 7 – Traditional Promotional Tools –This factor accounts for 6.078% of the variance. Important dimensions in this factor are "Radio Announcements are not strong Advertisement Tool now days" (.653), "Posters/ Printed Displays are Older Promotional Tools" (.621) and "Direct Mails are not Effective Now Days" (.579). This is not important factor as people are not influenced by older promotional tools. So, companies are trying to use latest methods of promotion in order to attract customers in a better way.
Factor 8 – Print Media –This factor accounts for 4.876% of the variance. Variables under this construct are "Magazine Ads" (.682) and "Regular E-mails" (.564). People ranked this factor as least important as magazines has become older media to advertise the product and rural people are not friendly with technology so they don't prefer E- mails also.

Discussion, Conclusion and Implications for Marketers:

Present research work has been carried out to identify the perception of urban and rural people towards promotional activities that are followed by the car manufacturers. The basic factors that make up the perceptual pattern are "Pricing Influence", "Local Advertisement", "Preliminary Informational Tool", "Visual Display", "Advertisement Effectiveness", "Web Marketing" and "Incentives", "Traditional Promotional Tools" and "Print Media". The most important factor is related with the pricing of the product. So marketers have to come up with latest monetary schemes that may help to promote the sales of the company to the large extent. The second factor is related with the local advertisements as people are more influenced by the local mediums of advertisements like wall writings, local brand ambassadors especially in villages, people are more influenced by local personalities like Sarpanchs, local stars etc. All other factors are less

important for the marketers so they should try to use modern promotional tools related with monetary benefits instead of traditional ones as people are very technology conscious and they react to newer methods quickly as compared to older ones.

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