

Study of Factors Influencing Pre Owned Car Purchase

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Abstract:

The paper is based on primary work done by authors on the factor influencing purchase decision of Pre owned car consumer in Pune city. The survey of 90 pre owned car customers from Pune city was done using structured questionnaire. The judgmental sapling technique was used and the data collected was analyzed using spss software. Factor analysis resulted showed that the Hedonic Benefit factors of the passenger car brands have dominated the preference of customers. The Factor Functional Reasons also had a good say on the total decision of the customer preference. Moreover, Social factor and Cultural and Religious Factors also are influencing significantly the customer preferences.

Introduction:

The Indian automotive industry has flourished like never before in the recent years. On the canvas of the Indian Economy. The domestic sales have reached a level of 2 million units per annum, growing in double digits. It is expected to rise further to 3.66 million units by 2014-15 and 5.2 million units by 2019-2 [Josephina and Rajeshwari (2012)]. Today the Indian Pre-owned car Industry has a mix of Organized and Unorganized car Sellers. Where Most of the Corporate Companies now opening their own retail chain across Indian market for sale of their own Pre owned cars. Customer has wide choice from this organized market where most of the cars are Certified by the company itself and therefore ensures customer satisfaction by giving maximum value for their money. Consumer attitudes to used vehicles have become more sophisticated as vehicles themselves have improved in quality and reliability. The tools used by consumers have also evolved, resulting in the need for dealers and manufacturers to fundamentally change their approach to the sale of used vehicles. C. Dharmaraj (2010) in his study says a consumer's decision to buy a product is the result of

interplay of many internal and external forces or stimuli. The starting point is the manufacturers' and marketer's stimuli in the form of product offering through some promotional methods, availability of the product or services at a reasonable price and to satisfy and retain the customers using different marketing strategies. But the environmental stimuli enter the buyer's mind through cultural, social, personal and psychological factors that influence the consumer Preferences. [C. Dharmaraj (2010)]

In this study, the researchers have focused upon the factors contributing to preference of pre owned passenger cars. This Paper is based on the Literature Review and Exploratory work done on the Pre owned car Customers from Pune City. The Study first establishes a scale of consumer preferences using Literature review and personal interview technique. The scale developed was then tested by surveying 90 Pre owned car customers in Pune city. The data collected was then analyzed using SPSS software.

CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW:

Among the various literature that through lights on the Poor quality products in the Pre owned car market i.e. on the concept of existence of Lemon product, Bond (1982, 1984), in his study tried to answer the existence of lemon product in the market by comparing the frequency of maintenance done on new and use trucks purchased.

In the Used car market there is limited information available about the quality of the car sold and therefore buyer of used car always find himself as cheated. One way of overcoming this lemon problem is by way of Certification of the used cars. A J. D. Power and Associates (2005) in their study revealed that the market share of certified used cars was 41% than the non certified car in the year 2005. Cutler and Kim (2005) in his study also mentions that certified cars get high price than the non certified cars.

Goyal and Aggarwal (2008) studied 277 customers from the car segments namely Luxury, Medium car and Small car, Using factor analysis and Correlation they found in the luxury car segment horse power, model, luggage capacity and accessories are prime factors that affects consumer decision making. While in Medium segment availability of spare parts, after sales service, model, shape, engine capacity etc. and in Small car segment after sales service and price were the main influencing factors. In a similar study done by Kaushik and Kaushik (2008) used cross tabulation and multi dimensional scaling

and concluded that brand Name , fuel efficiency and price were the main factors influencing purchase decision. Followed by influence of the friends and relatives than the company salesman.

Herrmann, et. al. (2007) by surveying 246 car customers of German car dealer they found that customer satisfaction is directly influenced by price of the product. Podoshen, et.al. (2009) surveyed 400 US based German car customers using Regression and ANOVA techniques concluded that the price is not the influencing factor for purchase decision but it is the acculturation and familial closeness to the holocaust. The study by Derrek and Prizzia (2010) used sample of 350 Hawaii residents, the results showed that regardless of gender and age all responded were ready to purchase hybrid car if the price is same as that of traditional gas fueled car. Wang et.al. (2008) in their study surveyed 1200 automobile customers in China, the study revealed that Brand Personality and Country of Origin (COO) positively influence the Purchase intentions of customers. Verlegh and Steenkamp (1999) found that consumer creates perception about quality of product based on their image about country of origin of product. Botschen and Hemettsberger (1998) also in their research suggests that consumer do have emotional attachment and feeling about Country of Origin (COO) and generally they relate it to National Identity. Johansson and Nebenzahl (1986), Han and Terpstra (1988) also showed in their study that Japanese car companies when shifted their manufacturing to a less developed country lost their brand image. Lee and Schaninger (1996) also supported in their study that even Global brands have suffered because of country where the product is manufactured or assembled

Customer's ethnocentrism also plays important role in purchase decision . Ethnocentrism is focuses on consumer loyalty to domestic products and morality perceived when buying a foreign product, Amal., et al. (2007). in their study found purchase intentions and nationalism appeared to play a strong role in consumer attitudes in forming overall evaluations of motor vehicles. Studies conducted by Balabanis and Diamantopoulos, (2004); Pecotich and Rosenthal, (2001), Wang and Chen, (2004) also support that ethnocentrism influence on consumer purchase behavior for local and foreign products. Fetscherin and Toncar (2010) in their study, using Multivariate analysis revealed that Brand personality in general is influenced by country of Manufacturing (COM) than country of Brand (COB). As per IBIS World (2005) vehicle price, exchange rate, income and vehicle innovation tend to influence product demand. Huber and Hermann, (2001) in their study reveals that customers loyalty contributes to firms performance by making additional purchases.. Andreassen and Lindestad, (1998), Dick and Basu, (1994) showed that customer loyalty and corporate image are positively correlated with each other.

Research Gap :

The Literature reviewed reveals that;

- 1] All the research work done till now is a consumer survey using either one or few factors at a time that influence consumer Purchase decision.
- 2] There is No research work done using a comprehensive list of factors together which influence the consumer Purchase Decision.
- 3] There is No literature found on the Factors influencing Pre owned car purchase decision in Indian Context.

Current study tries to close these Gaps.

Objective of the study :

The objective of this study is to develop and validate a scale for consumer preferences that affects consumer decision while selecting pre owned car.

Scope of the study

The study is limited to pre owned car customers from Pune city only.

Research Methodology:

The study was a quantitative type of research and the research design used was a survey method.

Universe : Pune city pre owned car customers form the universe for the study.

Sampling frame : The Researchers tried to get the list of Pre owned car customers from Pune Regional Transport Office (RTO) office but there was no list of pre owned car customers available with the Pune RTO. The Private pre-owned car sellers also did not provided the list of pre owned car customers and hence the sampling frame could not be prepared.

Sampling Technique : when there is no sampling frame available the best method to develop the sample is Judgmental sampling method. The sample was created using Snowball method.

Sample Size: The sample size used for the study was 90.

Instrument for Data Collection : Structured Questionnaire

Questionnaire Development:

Both the Primary and Secondary sources of Information were used to prepare the list of Factors that influence the Pre Owned car Purchase decision. The secondary sources included the various Articles and research papers from different journals, Consumer reports , Internet Website of Different Car Manufacturing Companies, Newspapers and Promotional material from the Various car dealers. Various factors that emerged from the secondary sources are listed in table 1 below.

The list of various factors emerged from discussion with Pre owned car Customers is listed in Table 2. The list of Factor emerged from the Interview of Industry Experts like Sales Managers from Pre owned car dealers and Company owned Certified outlets of Pre owned car is mentioned in table 3.

The factors which were repeated from primary and secondary sources were deleted to avoid the Duplication of Questions. Final list of Factors was then prepared using Triangulation method for the Development of Questionnaire to be used for the survey and for further Analysis.

Personally administered survey technique was used to approach Pre owned car customers.

Table 1 : list of factors that influence consumer decision generated from literature review.

Sr. No.	Factors
1	Quality
2	Price
3	Social class
4	Peer Pressure
5	Culture
6	Religious beliefs
7	Lifestyle

Table 2 : list of factors that influence consumer decision generated from customer Interview.

Sr. No.	Factors
1	Price
2	Quality
3	Friends and Relative Suggestion
4	Family members Preference
5	Social Class
6	Religious beliefs
7	Fame
8	Image

Table 3 : list of factors that influence consumer decision generated from Interview with Industry Experts.

Sr. No.	Factors
1	Price
2	Quality
3	Lifestyle
4	Personality
5	Friends Suggestion
6	Family member and relative suggestion
7	Image
8	Social class
9	Sense of belonging
10	Culture and religious beliefs

Questionnaire Design

The questions in the Questionnaire were structured and the language used was simple so that the respondents understand the exact meaning and can give their responses. The care was taken to avoid any kind of Ambiguity or vagueness while framing the questions.

The Questionnaire was divided into Three Parts; the first part comprised of the questions related to particulars of Pre owned car purchased the second Part comprised of the questions related to factors influencing pre owned car purchase decision. The last part of the questionnaire contained the questions related to personal information of the pre owned car customer. The questions were frame using 7-point Likert scale. The Respondent were to rate each factor between 1 to 7 based on the level of Importance they feel for the particular factor that influenced them while taking the Pre owned car Purchase decision. The respondent can rate the highest score of 7 to a particular factor if he/she feels that factor/attribute is the most influencing for decision making. And similarly respondent can rate the lowest score of 1 to the particular factor if he/she thinks that particular factor/attribute is not at all influencing his/her Purchase decision.

Data Analysis:

The data collected was analyzed using SPSS Software. Exploratory factor analysis is used to identify the underlying constructs and investigate relationships among the factors

The following steps have been conducted to analyze the data:

1] Test of Normality:

The data is to be checked for the assumption for Normality before going for any statistical tests. Assumption of normality was tested using criterion suggested by George and Mallery (2003). To test the assumption of Normality we look at the skewness and kurtosis value. Both these values were within the threshold of -1 and +1 for all the variables. Thus the assumption of Normality is Tenable.

2] Correlation matrix :

Using Descriptive statistics Correlation matrix was computed which revealed that there are enough Correlations among the factors and hence the Factor Analysis was done.

3] Kaiser-Meyer-Olkin measure of sampling adequacy

As shown in table 4, Kaiser-Meyer-Olkin (KMO) test of sampling adequacy and Bartlett's test of sphericity were carried out before undertaking exploratory factor analysis.

1. KMO statistic worked out to 0.601 which exceeds the minimum acceptable level of 0.5 recommended by Kaiser and Rice (1974) which is good enough for the further analysis.
2. Bartlett's test also proved highly significant (Approx chi square = 1836.964 and significant at 0.000) which means there is strong relationships among variables.

KMO Table:

Table 4 : KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.601
Bartlett's Test of Sphericity	Approx. Chi-Square	1836.964
	df	36
	Sig.	.000

Factor Analysis :

In order to understand the underlying factor structure an exploratory factor analysis was carried out using Principal Component Analysis technique and Varimax method of rotation. Kaiser's Eigen value based criterion indicates 4 factors having eigen value more than 1.

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	3.091	34.343	34.343	3.091	34.343	34.343	2.527	28.077	28.077
2	1.696	18.840	53.183	1.696	18.840	53.183	1.773	19.703	47.781
3	1.290	14.339	67.522	1.290	14.339	67.522	1.485	16.498	64.279
4	1.097	12.186	79.708	1.097	12.186	79.708	1.389	15.429	79.708
5	.679	7.548	87.256						
6	.480	5.330	92.587						
7	.293	3.256	95.842						
8	.208	2.313	98.155						
9	.166	1.845	100.000						

Extraction Method: Principal Component Analysis.

Table 6 :Rotated Component Matrix^a

	Component			
	1	2	3	4
social class	.925			
price factor	-.771			
Fame	.687	.480		
Image	.647			
quality conscious		.913		
Stress free driving		-.766		
sense of belonging			.828	
peer pressure			-.735	
religious pressure				.841

Extraction Method: Principal Component Analysis.

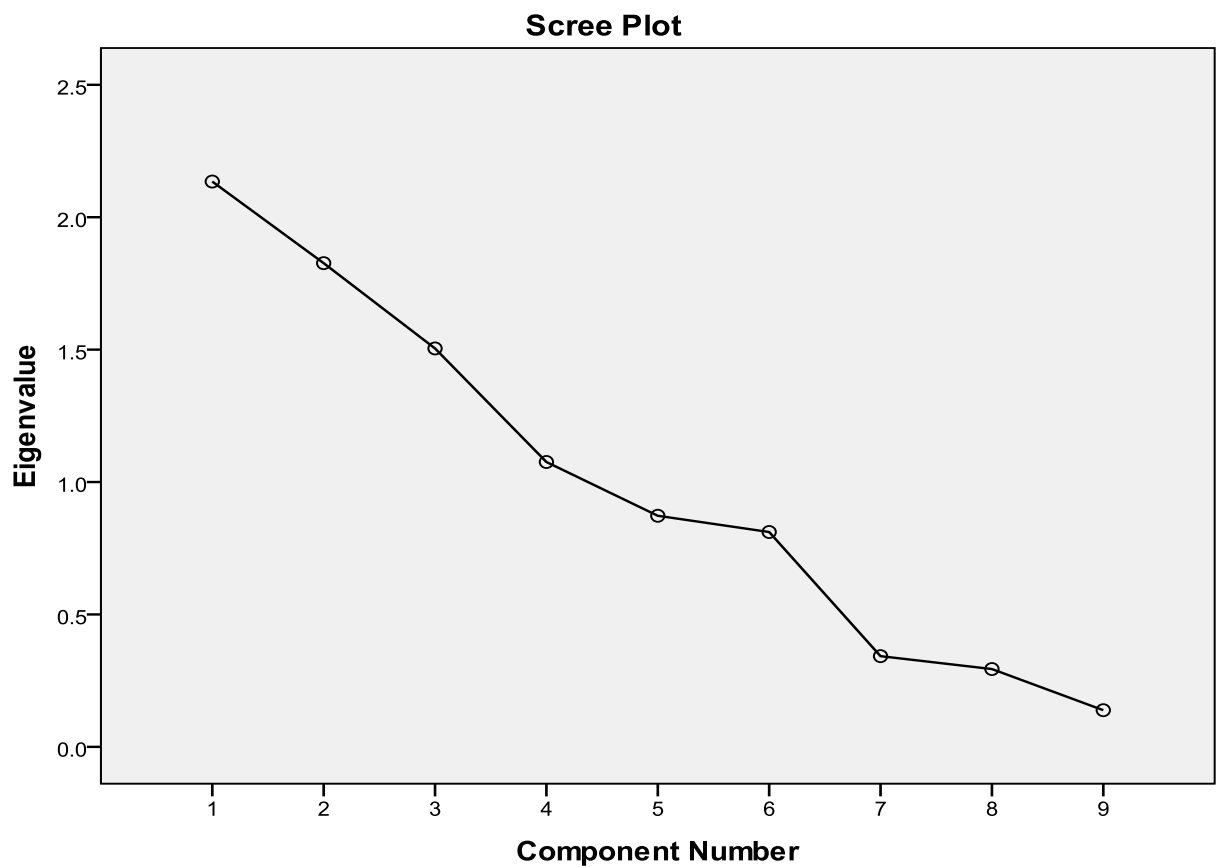
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

All factors converged into Four factors explaining 79.708% of the total Variance. The factors having Eigen values greater than one are considered significant, and all the factors with Eigen value less than one are considered insignificant and disregarded (Hair *et al.*, 1995). The percentage of total variance is used as an index to determine how well the total factor solution accounts for what the variables together represent. The index for present solution accounts for 79.708% of the total variation. It is pretty good figure and we lost only 20% of the information content in our study.

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 an original variable and its factor. The criterion given by Hair *et al.* (1995), where factor loading based on sample size is taken as the basis for decision about significant factor loading was adopted. For our sample of 900 respondents, a factor loading of 0.5 and above has been considered significant. All the four factors have been given appropriate names on the basis of variables represented in each case.



Scree plot is a graphical representation of factors and the corresponding Eigen values. The cut-off point for selecting factors using Scree plot is the point of inflection for the curve. The curve is inverted J shaped curve for the current example showing a descend after the fourth factor. There by suggesting four factor solution.

Factor Description

Precision about variables that have significant loadings on more than one factor needs to be made on the basis of purpose of study as well as judgment as to whether mixed pattern of loading makes sense Churchill Jr. and Iacobucci (2007), Kohli, Jaworski and Kumar (1990) observe that from measurement theory point of view there is no intrinsic need to eliminate such variables that load on more than one factor. Variable evaluation should be both data driven as well as theory driven (Mahat 2008).

Scale items that cross load on more than one factor, including such items that have a loading difference of more than 0.2 on two factors have been retained by scholars.

A one factor solution shows that all variables have a factor loading in excess of 0.5 on single factor.

- 1] Variable Social class, Image, Fame and Price Factor converged into one factor. It suggested that this Factor may be termed as **‘Hedonic Benefits’**.
- 2] Variable Quality Conscious and stress free driving converged into one factor. It may be termed as **‘Functional Reasons’**.
- 3] Variable Peer Pressure and Sense of Belonging converged into one factor which can be termed as **‘Social Factor’**.
- 4] Variable religious Pressure emerged as single factor which can be termed as **“Cultural and Religious Factor”**.

Validity and Reliability Analysis of Scale Developed :

The above scale was put to content validity (face) and construct validity (convergent and Discriminant). As the attributes are developed with the help of 'Pertinent secondary and primary sources, it is implied that the scale is appropriate for the task at hand and thus passes the test of face validity. The attributes have a high correlation with the related constructs (loading in excess of 0.5)

and low correlation with unrelated constructs (loading less than 0.4) and thus the scale passes the test of convergent and Discriminant validity. [Phadtare(2008)].

Reliability of The Instrument Developed :

The Overall Chronbach Alpha for the scale developed is 0.728. The value exceeds 0.7 the threshold suggested by Nunnally.

Conclusion:

The present study made a systematic effort on studying consumer preference towards Pre owned passenger cars in India by analyzing the factors that influence Purchase decision of Pre owned car customers. It is indeed obvious from the study that the Hedonic Benefit factors of the passenger car brands have dominated the preference of customers. The Factor Functional Reasons also had a good say on the total decision of the customer preference. Moreover, Social factor and Cultural and Religious Factors also are influencing significantly the customer preferences.

Contribution to knowledge:

This study reveal the various factors that influence the Purchase decision of Pre owned car customers. following are the major contribution of this study :

1. Findings from the study are more informative and useful to the Pre owned car customers. The car companies and Dealers will also understand the factors that influence the customers Preferences while selecting the brand.
2. The Car Companies and Dealers can formulate and design their promotional and sales strategies more effectively once they understand the customer requirement and preferences.

Limitations of the study

The study is based on the Literature review and the Primary data collected from the Pre owned car customers of Pune city only. Also the sample size used for the study was only 90. The cross validation of the scale was not done in the study.

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