

Impact Of Brand Preference Dimensions On Customer Satisfaction - A Meta Analysis For Passenger Cars

**Dr. C. Dharmaraj*

INTRODUCTION

In India, after independence, industrialization has paved the way for people to possess luxury items such as television, refrigerators, home appliances, cars, etc. Motor car is one of the commonly used conveyances by the upper and middle-class people. Before two decades, only a few industrialists and rich people owned cars. There was a time when one had to wait for weeks, months or even years to buy a car in India. The option of Indian drivers was limited to a few models. But, after industrialization, the earning capacity of the middle-class people has also increased. Now-a-days, motor car is not only bought for social status, but as a necessary one. Moreover, today, every middle / upper middle class people wants to have a car today. A consumer's decision to buy a product or service 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, available 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 play a critical role in purchase decision. Thus, the choice of the product/brand/service totally depends upon the consideration and influence of many factors. In this study, the researcher has focused upon the factors to assess the factors contributing to brand preference of passenger cars and its impact on customer satisfaction.

CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

Brand preference is an abstract term and it is necessarily formed through more than one component. This study endeavours to put together the antecedents and components of brand preference and tries to create a comprehensive framework for the measurement of the brand preference in the Indian automobile context. The American Marketing Association (1994) defines a brand as a "name, term, sign, symbol or design, or a combination of them intended to encourage prospective customers to differentiate a producer's product (s) from those of competitors". The primary function of the brand is to provide convenience and clarity in decision making, providing a guarantee of performance and communicating a set of expectations, thereby offering certainty and facilitating the buying process. Keller 2002 in his study said that the brand is the sum total of all elements of the marketing mix. Brands can also be explained based on their elements- "...those trademark able devices that serve to identify and differentiate the brand (eg; brand names, logos, symbols, characters, slogans, jingles and packages)" (Phillips, 1988). In his study, Phillips has described a brand that can be described as a "trademark that communicates a promise". Broadbent and Cooper, 1987 in their study noted that, if the brand is to be successful, images and symbols must relate to and indeed exploit the needs, values and lifestyles of consumers in such a way that the meanings involved give added values, and differentiate the brand from other brands. Park et al., 1996 in their article stated that, symbolic and functional attributes that the market place associates with the brand. Symbolic attributes are those that satisfy internally generated needs for self-enhancement, role position, group membership or ego identification, whereas, functional brand attributes solve an externally generated consumption related problem. Ambler and Styles (1996) describe two different views of defining a brand. The first is the product plus view, when the brand is seen as an addition to the product, and in this view, a brand is also called an identifier. The second is the holistic view that communicates the focus on the brand itself that is considered to be much more than just the product. Rogers, 1995; Mason, 1990 in their study explained how consumers form preferences for various goods and services using theories of adoption. Ravichandran.K, and Narayanarajan.S (2004) studied factors determining the brand preference of consumer durables. They concluded that the study with brand preference of consumer durables is largely influenced by a number of factors such as advertisement, price, quality,

**Assistant Professor (SG), School of Management, Karunya University, Coimbatore, Tamil Nadu.
Email: dharmarajbusiness@gmail.com*

performance, availability of spares, and after-sales service. Moreover, these factors play a vital role in the decision-making process and in the brand preference. Kotta Thomas. L (1992) in his study examines the influence of extrinsic cause viz. price, reputation of the product and advertising that has been investigated in a main experimental setting using multi-item measures. The results indicate that all the three signals affect consumer's quality perception and they have an indirect influence on purchase intent. Tickwell, Paul A, M Horgan, Dianne D and Keeny Charles Text (1993) investigated the implications of loyal and non-loyal brands and in this study they found that significant differences exist between loyal and non-loyal brands and also a high correlation exists between self image and product user rating. Dorsch et al., 2000 studied Consumer choice behaviour using the five-step process (need-information search-evaluation of alternatives- purchase-post-purchase evaluation) problem solving paradigm or through the progression of consumer choice from a product class to brand choice. Abdul Haneef. M, Abdul Karim.B. A and Edwin Gnanadhas. M (2006) in their study noted that consumer behaviour is influenced strongly by cultural, social, personal and psychological factors. Cultural factors include the set of basic values, perceptions, wants and behaviour learned by a member of society from the family and other important institutions. The social factors include consumer's family, small group, social roles and status. The personal characteristics such as buyer's age, lifecycle stage, occupation, economic situation and lifestyle influence a buyer's decision. A person's buying choices are further influenced by four major psychological factors: Motivation, Perception, Learning, Beliefs and Attitudes. Wee (2003) conducted a study to identify the factors affecting adoption of new product innovations in the consumer electronic industry of Singapore using qualitative and quantitative research techniques, the researcher considered two brands and using factor analysis, seven factors were identified as critical in effecting adoption of a player: relative advantage, perceived risk, complexity, compatibility, observability, image and trialability. Smita Sharma (2006) in her study pointed out the importance of celebrity endorsement in advertisement and concluded that advertisers use endorsers to add excitement and glamour to their brands. Basically, celebrity endorsements give a brand a touch of glamour in the minds of people, and the hope that a famous face will provide added appeal and name recognition in a crowded market. Suresh. A.M and Raja. K.G (2006) made an attempt to measure the customer satisfaction with small cars. In this study, the customer satisfaction is measured by using the following variable attributes under different dimensions, namely, after sales service, ability to understand customer needs, behaviour and knowledge of the mechanics, warranty, prompt delivery, 24 hours customer care, information about the cars, horse power, engine capacity, power steering, technology, fuel capacity, acceleration, easy finance, convenience and accessibility, ground clearance, easy processing and documentation, price, discount and rebates, fuel efficiency, maintenance cost, luggage capacity, safety measures, model and colour of the car, music accessories, engine pickup, availability of spares, cost of labour and spares. Karjaluoto et al. (2005) investigated the consumer choice in the context of the mobile phone industry in Finland and the study was conducted to assess consumer motivations in mobile phone choice. Seven estimated factors influencing mobile phone choice were: Innovative services, multimedia, design, brand and basic properties, outside influence, price. Doyle, 2002 in his study pointed out the important product decisions in any marketing context are product, variety, product performance, product features, product design, product presentation, sizes, etc. Kotler, 2003 in his study stated that consumer surveys often reveal that quality is one of the important, if not the most important decision factors for consumers and product quality stands for the ability of a product to perform its functions.

STATEMENT OF THE PROBLEM

Consumer choice process is a complex phenomenon. Making a decision to buy a product or services involves many processes. The literature on brand preference studies reveals that for the selection of durable products, especially passenger cars, the customer has to spend much time to evaluate and choose the desired one based on their need and economic condition. The marketing strategies followed by the manufacturer and marketer as well as pre-conceived idea of the buyer also play a vital role in selection of a particular brand and to get more satisfied. Only a limited number of attempts have been made to study the impact of brand preference factors on customer satisfaction. Based on these basic questions, the researcher has developed an interest to study the factors contributing brand preference of passenger cars and its impact on customer satisfaction level.

OBJECTIVES OF THE STUDY

1. To study the factors affecting brand preference of passenger cars.

2. To analyze the impact of brand preference factors on customer satisfaction.

METHODOLOGY

This study, endeavouring to test the brand preference model, is exploratory in nature. The data for the study, primary in nature, has been collected using questionnaires from 712 customers of car owners in the area of Coimbatore city, during the period from April, 2005 to April, 2008 in the State of Tamil Nadu, India.

TOOL USED

1. Friedman's test. 2. Multiple Regression Analysis

ANALYSES AND DISCUSSIONS

A. FRIEDMAN'S TEST

The Friedman test statistic is mainly used for ranking the variables. The Friedman test ranks the scores in each row of the data file independently of every other row. The factors that will influence the respondents towards the brand preference were classified into four dimensions namely, "Information Factors, Psychological Factors, Economic Factors and Product Factors". The variables used under the above said four dimensions are developed with the help of literature review and classified using factor analyses. In this study, Friedman test is used to identify the factor which has a greater influencing effect on the respondent towards brand preference and the same are given below.

INFLUENCING FACTORS TOWARDS BRAND PREFERENCE- INFORMATION FACTORS

To identify the information factors which are more influencing the respondents towards brand preference, the Friedman's test is used and result of the test is given in Table 1.

Table 1: Descriptive Statistics - Information Factors

Information Factors	Mean	SD	Mean Rank	Chi-square	Df	P
Advertisement	2.71	.770	6.57	251.77	9	0.00**
Dealer's Schemes	2.51	.806	5.83			
Salesmanship	2.45	.854	5.71			
Internet	2.37	.917	5.56			
Friends	2.66	.790	6.43			
Relatives	2.57	.829	6.12			
Coworkers	2.50	.830	5.85			
Neighbours	2.44	.892	5.68			
Decision Influenced By Spouse	2.52	.857	5.98			
Past Experience	2.49	.895	5.85			
** Highly Significant (at 1% Level)						

The Friedman chi-square tests the null hypothesis that the ranks of the variables do not differ from their expected value. For a constant sample size, the higher the value of this chi-square statistic, the larger the difference between each variables rank sum and its expected value. For these rankings, the chi-square value is 251.77; Degrees of freedom are equal to the number of variables minus 1. The asymptotic significance is the approximate probability of obtaining a chi-square statistic as extreme as 251.77 with nine degrees of freedom in repeated samples if the rankings of each factors are not truly different. Because a chi-square of 251.77 with 9 degrees of freedom is unlikely to have arisen by chance, it has to be concluded that the 712 respondents do not have equal preference for all factors.

It could be noted from the above Table 1 that among the ten factors, Advertisement (6.57) was ranked first. It is followed by Friends (6.43), Relatives (6.12), Decisions influenced by spouse (5.98), Past experience (5.85) and Dealer schemes (5.83) which were ranked second, third, fourth, fifth and sixth respectively.

Hence, it is concluded that among the 10 factors, Advertisement, Friends, Relatives and Decisions influenced by

spouse influences are more in consumer's car preference.

INFLUENCING FACTORS TOWARDS BRAND PREFERENCE- PSYCHOLOGICAL FACTORS

In order to identify the psychological factors which are influencing more the respondents towards brand preference, the Friedman's test is used and results of the test is given in Table 2.

Table 2: Descriptive Statistics - Psychological Factors

Psychological Factors	Mean	Sd	Mean Rank	Chi-square	Df	P
Social Status	2.65	.786	6.47	639.80	12	0.00**
Celebrity Endorsements	2.35	.924	5.46			
Image Of The Manufacturer	2.66	.806	6.55			
Brand Superiority	2.81	.717	7.09			
Brand Loyalty	2.77	.764	6.99			
Brand Name	2.85	.726	7.28			
Personal Values	2.64	.779	6.36			
Necessity	2.66	.788	5.42			
After Sales Service	2.63	.745	6.33			
Status Symbol	2.63	.754	6.29			
Driving Comfort	2.74	.743	6.81			
Style And Colour	2.72	.773	6.77			
Logo / Symbol	2.41	.894	5.60			
** Highly Significant (at 1% Level)						

It is clear from the above Table 2 that among the thirteen factors, Brand name (7.28) was ranked first. It is followed by Brand superiority (7.09), Brand loyalty (6.99), Driving comfort (6.81) and Image of the manufacturer (6.55) which were ranked second, third, fourth, and fifth respectively.

Thus, it can be concluded that among the 13 factors, Brand name, Brand superiority, and Brand loyalty play a major role in influencing consumers' car preference.

INFLUENCING FACTORS TOWARDS BRAND PREFERENCE - ECONOMIC FACTORS

To identify the economic factors which are influencing the respondents towards brand preference, the Friedman's test is used and results of the test is given in the Table 3.

Table 3: Descriptive Statistics - Economic Factors

Economic Factors	Mean	Sd	Mean Rank	Chi-square	Df	P
Price	2.67	.798	4.60	112.93	7	0.00*
Disposable Income	2.57	.800	4.26			
Easy Finance	2.60	.787	4.37			
Discount Offers	2.61	.828	4.42			
Maintenance Cost	2.66	.822	4.61			
Free Insurance	2.64	.797	4.50			
Resale Value	2.60	.824	4.41			
Mileage	2.76	.770	4.84			
** Highly Significant (at 1% Level)						

It could be noted from the above Table 3 that among the eight factors, Mileage (4.84) was ranked first. It is followed by Maintenance cost (4.61), Price (4.60), Free insurance (4.50), Discount offers (4.42) and Resale value (4.41) which

were ranked second, third, fourth, fifth and sixth respectively.

Therefore, it can be concluded that Mileage, Maintenance cost and Price play a major role in influencing a consumer's car preference.

INFLUENCING FACTORS TOWARDS BRAND PREFERENCE - PRODUCT FACTORS

To find the product factors which are influencing more the respondent towards brand preference, the Friedman's test is used and result of the test is given in the following Table 4.

Table 4: Descriptive Statistics - Product Factors

Product Factors	Mean	Sd	Mean Rank	Chi-square	Df	P
Quality	2.81	.761	11.79	780.36	19	0.00**
Comfort	2.77	.724	11.41			
Appearance	2.66	.786	10.65			
Seating Capacity	2.69	.717	10.85			
Technology	2.75	.698	11.14			
Durability	2.70	.751	10.86			
Availability	2.66	.757	10.62			
Warranty Terms	2.67	.760	10.75			
Road Grip	2.68	.765	10.76			
Horsepower	2.69	.733	10.80			
Engine Capacity	2.68	.772	10.78			
Luggage Capacity	2.56	.835	10.00			
Accessories	2.60	.800	10.20			
Parking Convenience	2.55	.840	10.08			
Safety Features	2.61	.846	10.49			
Gift Packages	2.24	.950	8.31			
Luxury	2.54	.878	9.98			
Recent Euro Norms	2.42	.889	9.27			
Space	2.60	.829	10.26			
Brake, Power Steering	2.70	.775	10.98			
** Highly Significant (at 1% Level)						

It is noticed from the above Table 4 that among the twenty factors, Quality (11.79) was ranked first. It is followed by Comfort (11.41), Technology (11.14), Brakes, Power Steering (10.98), Durability (10.86) and Seating capacity (10.85) which were ranked second, third, fourth, fifth and sixth respectively.

It can be concluded that among the 20 factors, Quality, Comfort, Technology, Brakes, Power Steering and Durability play major roles in influencing consumer's car preference.

B. MULTIPLE REGRESSION ANALYSIS

Multiple regression analysis was deployed to ascertain the impact of brand preference dimensions over the level of satisfaction on performance of the car. Linear regression is used to model the value of a dependent scale variable based on its linear relationship to one or more predictors. Linear regression estimates the coefficients of the linear equation, involving one or more independent variables that best predict the value of the dependent variable. A correlation matrix is also displayed. The linear regression model assumes that there is a linear, or "straight line" relationship between the dependent variable and each predictor. This relationship is described in the following formula.

$$y_i = b_0 + b_1x_{i1} + \dots + b_px_{ip} + e_i$$

Where

y_i is the value of the i^{th} case of the dependent scale variable.

p is the number of predictors

b_j is the value of the j^{th} coefficient, $j = 0, \dots, p$

x_{ij} is the value of the i^{th} case of the j^{th} predictor

e_i is the error in the observed value for the i^{th} case

The model is linear because increasing the level of influence of the j th predictor increases the level of satisfaction of the dependent by b_j . In this section, multiple regression analysis is used to explain the variation in the level of satisfaction (dependent variable) based on the variation over the variables (independent variable) Information factors, Psychological factors, Economic factors and Product factors.

Therefore, the multiple regression equation becomes

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$$

Dependent variable $Y =$ satisfaction on performance.

Independent variables are $X_1 =$ Information factors.

$X_2 =$ Psychological factors.

$X_3 =$ Economic factors.

$X_4 =$ Product factors

First descriptive statistics of the variables are considered. The average satisfaction on performance found from Table 5 is 38.66152. The Table also shows the average level of influence of the Information factor is 27.88483, the average level of influence of the Psychological factors is 31.86236, the average level of influence of the Economic factors is 21.11657 and the average level of influence of the Product factors is 52.60253. The Table 5 also reports the strength of the relationship between the various factors and the dependent variable. R, the multiple correlation coefficients, is the linear correlation between the observed and predicted values of the dependent variable. Its large value (0.86) indicates a strong relationship between the various factors and the dependent variable. The squared value of the multiple correlation (0.74) shows that about seventy-four percent of the variation in satisfaction on performance is explained by the model.

Table 5: Regression Descriptive Statistics

Factors	Mean	Std. Deviation	R	R Square
Satisfaction On Performance	38.66152	4.720221	0.86	0.74*
Information Factor	27.88483	7.208426		
Psychological Factor	31.86236	7.536924		
Economic Factor	21.11657	5.437967		
Product Factor	52.60253	12.56581		
* Significant				

The ANOVA Table 6 reports a significant F statistic, indicating that using the model is better than guessing the mean. As a whole, the regression does a good job of modeling satisfaction on performance. The ANOVA Table tests the acceptability of the model from a statistical perspective. The regression row displays information about the variation accounted for the model. The residual row displays information about the variation that is not accounted for the model. The regression sum of square is lesser than residual sums of squares, which indicates that nearly seventy four percent of the variation in satisfaction on performance is explained by the model.

Table 6: Anova- Significant F Statistic

	Sum of Squares	Df	Mean Square	F	P
Regression	675.9964	4	168.9991	7.8786.	000**
Residual	15165.43	707	21.45039		
Total	15841.43	711			
** Highly Significant (at 1% level)					

⊛ **Predictors:** (Constant), Information Factors, Psychological Factors, Economic Factors And Product Factors.

⊛ **Dependent Variable:** Satisfaction On Performance.

The significance value of the F statistic is less than 0.01, which means that the variation explained by the model is not due to chance. Even though the model fit looks positive, the first section of the coefficients (Table 7) shows that there is predictor in the model which is non-significant coefficients, indicating that the Information factors and Psychological factors which do not contribute much to the model.

Table 7: Regression Coefficients

Factors	B	Std. Error	T	P
(Constant)	38.73736	0.764161	50.69265	0.000**
Information Factor	0.023491	0.066026	0.355786	0.722107
Psychological Factor	-0.09703	0.071823	-1.351	0.177127
Economic Factor	-0.35305	0.077541	-4.55311	0.000**
Product Factor	0.186608	0.044061	4.235254	0.000**

Dependent Variable: Satisfaction On Performance

The above Table 7 shows the coefficients of the regression line. It states that the expected level of satisfaction on performance is equal to,

$$Y = 38,73736 + 0.023491X_1 - 0.09703X_2 - 0.35305X_3 + 0.186608X_4.$$

Looking at the significance values from the Table 7, it can be seen that B coefficient of Information factors and Psychological factors are not influencing significantly the level of satisfaction, because the 'p' value for Information factors and Psychological factors are greater than 0.05. On the other hand, Economic factors and Product factors are influencing significantly the level of satisfaction because the 'p' value for Economic factors and Product factors are less than 0.05.

IMPLICATIONS OF THE STUDY

This study refined the factors that will influence the brand preference of passenger cars in India and revealed the impact of brand preference dimensions on customer satisfaction. A few paramount implications of the study are outlined here.

1. Findings of this study indicate that the study is more informative and useful for general public as even the manufacturers and dealers can understand the dimensions reflecting brand preference of passenger cars and impact of all these factors on customer satisfaction.
2. Findings of this study also indicate that it is worthwhile for the car buyer to take note of the results of this study before going for actual purchase.
3. Moreover, the academic researchers in a developing economy like India can gain further, by using the inventory in this study in their durable sectors study.

CONCLUSION

The present study made a systematic effort on studying consumer brand preference towards passenger cars in India by analyzing the factors that influence brand choice of the customers and revealed the impact of brand preference dimensions on customer satisfaction. It is indeed obvious from the study that the performance factors of the passenger car brands have dominated the preference of customers, based on their economic status. The marketing communication unleashed by manufacturers and dealers also had a fair say on the total decision of the customer preference. Overall, it is the all round ability of the car brands, viz, reliability, safety, technology, value for money, high resale value, high mileage, maintenance cost, quality, comforts, durability, etc., that prove to be decisive factors of choice right across the globe as well as in India. Moreover, among the four dimensions, Information factors and Psychological factors are not influencing significantly the level of satisfaction of the respondents than the Economic factors and Product factors.

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