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THE COMPETITIVE IMPLICATIONS OF CONSUMER EVALUATION OF BRAND IMAGE, PRODUCT ATTRIBUTES, AND PERCEIVED QUALITY IN COMPETITIVE TWO-WHEELER MARKETS OF INDIA

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Abstract

The purpose of the study is to test empirically the conceptualization of consumer evaluation of brand image, brand attitude and perceived quality of a two-wheeler, which is considered as a durable product. Results of the study might be useful to academicians, manufacturers, and other applied researchers.

Keywords: Customer Evaluation, Brand Image, Quality

1. INTRODUCTION

Brand attributes consist of 'bits' of information that are linked to a brand name in consumer memory and that, when combined with the brand name, make up a brand's image (Keller, 1993). The brand attributes themselves come from a variety of sources, including consumer experiences, marketing communications, and/or word of

mouth (Krishnan, 1996). The linkages between the brand name, its attributes, and other brands in the marketplace mean that associated attributes can be unique to the consumer, unique to the brand, or shared with other brands (Meyers-Levy, 1989). Two-wheeler is an important product item in modern society both urban and rural areas. Consumers mainly purchase the product for their convenience. Gradually it is becoming

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more popular in the consumers' world and its demand is world- wide (Nuruzzaman, 1996). Consumers purchase decisions for two wheelers are always influenced by a number of factors, which lead them to select a particular brand in preference to others. In this study ten attributes are considered as important cues, which lead consumer to select a particular brand of two-wheeler. This study examines products from a high involvement consumer product category. Researchers include brand, which is highly similar on measurable attributes such as cylinder capacity (CC). The reasoning is that the nature of the competitive marketplace offers many brands within distinct subcategories and this may provide further understanding of brand choice relating to present market conditions.

2. RELATED TERMS

2.1. Brand

The brand is conceptualized as a node in memory, which allows other information about the brand to be “anchored” to it (Aaker, 1991). The conceptualization of a network of brand associations in memory with brand as a central core has been put forward by many others (Killer, 1993; Holden, 1993; Holden & Lutz, 1992). A brand that is not considered cannot be chosen (Baker et al., 1986). Further, the probability of the brand being chosen is a condition of the number of other brands in the consideration set. Consumers may employ heuristics (decision rule) to buy only familiar, well-established brands (Roselius, 1971; Jacoby et al., 1977; Keller, 1993). For a consumer to buy a brand positive attitude must first be made but brand attitude cannot

be formed and intention to buy cannot occur unless brand awareness occurs (Rossister & Perey, 1991).

2.2. Brand image

A brand image is the totality of consumer perceptions about the brand, or how they see it, which may not coincide with the brand identity. Brand image is defined as the reasoned or emotional perception consumers attach to specific brands (Dobni & Zinkhan, 1990). A brand image consists of functional and symbolic brand beliefs. A measurement technique using semantic differential items generated for the relevant product category has been suggested for measuring brand image (Dolich, 1969; Fry & Claxton, 1971). Brand image associations are largely product category specific and measures should be customized for the unique characteristics of specific brand categories (Park & Srinivasan, 1994; Bearden & Etzel, 1982). Brand benefits are the foundation of brand image. Chiranjeeb (1997) claimed that a brand name itself is the foundation of brand image. In a broad sense purchase decisions are based almost solely upon the attitude existing at the time of purchase. The factors which may prevent consumers from converting their attitudes into intentions and buying behavior are very numerous and frequent (Wallendorf, 1979). Brand attitude: Attitudes are not overt behaviors but rather are covert, or unobservable internal reactions (Kim, 2002). It is one of the pervasive notions in all of the Marketing (Gillbert, 1995). Formal attitudes are learned predispositions to respond to some object in a consistent way. The response may be favorable or unfavorable (Wallendorf, 1979). Consumers learn these attitudes over time by being exposed to the object directly or through receiving

information about the object. Our learned attitudes serve as general guides to our overt behavior with respect to the attitude object, giving rise to a consistently favorable or unfavorable pattern of response.

2.3. Product Attributes

Product attributes are the benefits of products, and these benefits are the surface means used in advertisement and promotion offer to connect the brand with a motivation which influence brand attitude (Rossister, 1987). Nowadays, companies try to differentiate their products emphasizing some trivial attributes which in a real sense create no differences from those of its competitors' or, sometimes they are not actually used by consumers at all (Chowdhury & Islam, 2003). Different techniques are suggested in the literature to find out which attributes consumers use to judge products (Snelders & Schoormans, 2000). Making a product different from its competitors by adding even a meaningless attribute can increase consumers' quality perception or can decrease perceived risk (Simonson & Tversky, 1992). It is evident that product attributes are most salient to the consumers (Garvin, 1983; 1984). In reality, during the decision for a dealing, it is assumed that consumers not only consider the present value of the products but also take the future performance or future associated with the product attributes into consideration (Chowdhury & Islam, 2003). Perceived Quality: Perceived quality is defined as the consumer's judgment about a product's overall excellence or superiority (Zeithaml, 1988; Aaker & Jacobson, 1994). For example, Sethuraman and Cole (1997) found that perceived quality explains a considerable portion of the variance in the

price premium consumers are willing to pay for national brands. The perceived quality of products and services of strong brands add value to consumers' purchase evaluations.

2.4. Durable goods

A durable good or a hard good is a good which does not quickly wear out, or more specifically, it yields services or utility over time rather than being completely used up when used once. Durable goods are typically characterized by long interpurchase times that is the time between two successive purchases. Most goods are therefore durable goods to a certain degree. Perfectly durable goods never wear out. Generally they have a lifespan of more than 3 years. Goods that aren't consumed or quickly disposed of, and can be used for several years are called durable goods.

2.5. High involvement consumer product

High-Involvement Products are products for which the buyer is prepared to spend considerable time and effort in searching. They mostly are one time, high value prestige, self-esteem oriented products.

3. JUSTIFICATION OF THE STUDY

Many national companies of various countries are deregulating and encouraging market forces to operate. Multinational companies are also aggressively moving into new markets and practicing global marketing by maintaining conformance of quality and brand positioning. Consumers of a product also are getting multiple options to choose their product or brands by considering

quality and other features. Quality "lies in the eyes of the beholder" (Garvin, 1984). Individual consumers are assumed to have different wants or needs, and those goods that best satisfy their preferences are regarded as having the highest quality (Edwards, 1968; Kuehn & Day, 1962). This is an idiosyncratic personal view of quality, and one that is highly subjective (Garvin, 1984). A quality product is one that provides references at an acceptable price (Broch 1982; Feigenbaum, 1961). Consumers are for value that will best satisfy their needs and wants. They are for products that best satisfy their preferences with minimum cost i.e. they expect the highest quality of the products. In the consumer oriented markets intrinsic quality is becoming a basic expectation of customers (Carpenter et al., 1994). Product attributes as well as psychological mechanisms may influence the purchase of products. Some, of these attribute beliefs create a strong sense of preference in consumers mind; (Barringer et al., 1999; Bloch & Richins, 1983). Today's consumers are very conscious about various two wheelers. This study will help the marketers to know consumer choice of their brands. After knowing this, company or marketers can take efficient and effective measures to persuade the consumers. Manufacturing companies should be well informed about the dimension of quality emphasized by consumers for taking their purchase decision. Research is a careful inquiry or examination to discover new information or relationships and to expand and to verify knowledge (Abedin, 1996). The quality of a product and its brand image is becoming an important competitive issue in the global market place.

4. OBJECTIVES AND RESEARCH QUESTIONS

4.1. The Main Objective

1. To test empirically consumers' brand evaluation brand image, brand attitude and quality perception.

4.2. Specific Objectives

1. To measure the image of brands,
2. To investigate the impact of brand image and the attributes on brand preferences;
3. To provide suggestion to managers of brands and other related bodies for practical measurement of the brand image based on different attributes of quality perception.

5. INDIAN TWO-WHEELER INDUSTRY: A PERSPECTIVE

Automobile is one of the largest industries in global market. Being the leader in product and process technologies in the manufacturing sector, it has been recognized as one of the drivers of economic growth. During the last decade, well-directed efforts have been made to provide a new look to the automobile policy for realizing the sector's full potential for the economy. Steps like abolition of licensing, removal of quantitative restrictions and initiatives to bring the policy framework in consonance with WTO requirements have set the industry in a progressive track. Removal of the restrictive environment has helped restructuring, and enabled industry to absorb new technologies, aligning itself with the global development and also to realize its potential in the country. The liberalization

policies have led to continuous increase in competition, which has ultimately resulted in modernization in line with the global standards as well as in substantial cut in prices. Aggressive marketing by the auto finance companies have also played a significant role in boosting automobile demand, especially from the population in the middle income group.

5.1. Evolution of Two-wheeler Industry in India

Two-wheeler segment is one of the most important components of the automobile sector that has undergone significant changes due to shift in policy environment. The two-wheeler industry has been in existence in the country since 1955. It consists of three segments viz. scooters, motorcycles and mopeds. According to the figures published by SIAM, the share of two-wheelers in automobile sector in terms of units sold was about 80 per cent during 2003-04. This high figure itself is suggestive of the importance of the sector. In the initial years, entry of firms, capacity expansion, choice of products including capacity mix and technology, all critical areas of functioning of an industry, were effectively controlled by the State machinery. The lapses in the system had invited fresh policy options that came into being in late sixties. Amongst these policies, Monopolies and Restrictive Trade Practices (MRTP) and Foreign Exchange Regulation Act (FERA) were aimed at regulating monopoly and foreign investment respectively. This controlling mechanism over the industry resulted in: (a) several firms operating below minimum scale of efficiency; (b) under-utilization of capacity; and (c) usage of outdated technology. Recognition of the damaging effects of

licensing and fettering policies led to initiation of reforms, which ultimately took a more prominent shape with the introduction of the New Economic Policy (NEP) in 1985.

However, the major set of reforms was launched in the year 1991 in response to the major macroeconomic crisis faced by the economy. The industrial policies shifted from a regime of regulation and tight control to a more liberalized and competitive era. Two major results of policy changes during these years in two-wheeler industry were that the, weaker players died out giving way to the new entrants and superior products and a sizeable increase in number of brands entered the market that compelled the firms to compete on the basis of product attributes. Finally, the two-wheeler industry in the country has been able to witness a proliferation of brands with introduction of new technology as well as increase in number of players. However, with various policy measures undertaken in order to increase the competition, though the degree of concentration has been lessened over time, deregulation of the industry has not really resulted in higher level of competition.

5.2. A Growth Perspective

The composition of the two-wheeler industry has witnessed sea changes in the post-reform period. In 1991, the share of scooters was about 50 per cent of the total 2-wheeler demand in the Indian market. Motorcycle and moped had been experiencing almost equal level of shares in the total number of two-wheelers. In 2003-04, the share of motorcycles increased to 78 per cent of the total two-wheelers while the shares of scooters and mopeds declined to the level of 16 and 6 per cent respectively. A clear picture of the motorcycle segment's

gaining importance during this period is exhibited by the Figures 1, 2 and 3 depicting total sales, share and annual growth during the period 1993-94 through 2003-04.

5.3. Demand Drivers

The demand for two-wheelers has been influenced by a number of factors over the past five years. The key demand drivers for the growth of the two-wheeler industry are as follows:

1. Inadequate public transportation system, especially in the semi-urban and rural areas;
2. Increased availability of cheap consumer financing in the past 3-4 years;
3. Increasing availability of fuel-efficient and low-maintenance models;
4. Increasing urbanization, which creates a need for personal transportation;
5. Changes in the demographic profile;
6. Difference between two-wheeler and passenger car prices, which makes two-wheelers the entry level vehicle;
7. Steady increase in per capita income over the past five years; and
8. Increasing number of models with different features to satisfy diverse consumer needs.

While the demand drivers listed here operate at the broad level, segmental demand

is influenced by segment-specific factors. National Council of Applied Economic Research (NCAER) had forecast two-wheeler demand during the period 2002-03 through 2011-12. The forecasts had been made using econometric technique along with inputs obtained from a primary survey conducted at 14 prime cities in the country. Estimations were based on Panel Regression, which takes into account both time series and cross section variation in data. A panel data of 16 major states over a period of 5 years ending 1999 was used for the estimation of parameters. The models considered a large number of macro-economic, demographic and socio-economic variables to arrive at the best estimations for different two-wheeler segments. The projections have been made at all India and regional levels. Different scenarios have been presented based on different assumptions regarding the demand drivers of the two-wheeler industry. The most likely scenario assumed annual growth rate of Gross Domestic Product (GDP) to be 5.5 per cent during 2002-03 and was anticipated to increase gradually to 6.5 per cent during 2011-12. The all-India and region-wise projected growth trends for the motorcycles and scooters are presented in Table 1. The demand for mopeds is not presented in this analysis due to its already shrinking status compared to' motorcycles

Table 1. Demand forecast for motorcycles and scooters in for 2011 - 12

2-WHEELER SEGMENT	REGIONS				
	South	West	North-Central	East & North-East	All India
Motorcycle	2835 (12.9)	4327 (16.8)	2624 (12.5)	883 (11.1)	10669 (14.0)
Scooter	203 (2.6)	219 (3.5)	602 (2.8)	99 (2.0)	1124 (2.08)

Note: Compound Annual Rate of Growth during 2002-03 and 2011-12 is presented in parenthesis

Source: Indian Automobile Industry: Optimism in the Air, Industry Insight, NCAER

and scooters. It is important to remember that the above-mentioned forecast presents a long-term growth for a period of 10 years. The high growth rate in motorcycle segment at present will stabilize after a certain point beyond which a condition of equilibrium will set the growth path. Another important thing to keep in mind while interpreting these growth rates is that the forecast could consider the trend till 1999 and the model could not capture the recent developments that have taken place in last few years. However, this will not alter the regional distribution to a significant extent. Table 1 suggests two important dimensions for the two-wheeler industry. The region-wise numbers of motorcycle and scooter suggest the future market for these segments. At the all India level, the demand for motorcycles will be almost 10 times of that of the scooters. The same in the western region will be almost 20 times. It is also evident from the table that motorcycle will find its major market in the western region of the country, which will account for more than 40 per cent of its total demand. The south and the north-central region will follow this. The demand for scooters will be the maximum in the northern region, which will account for more than 50 per cent of the demand for scooters in 2011-12.

The present economic situation of the country makes the scenario brighter for short-term demand. Real GDP growth was at a high level of 7.4 per cent during the first quarter of 2004. Both industry and the service sectors have shown high growth during this period at the rates of 8.0 and 9.5 per cent respectively. However, poor rainfall last year will pull down the GDP growth to some extent. Taking into account all these factors along with other leading indicators including government spending, foreign

investment, inflation and export growth, NCAER has projected an average growth of GDP at 6.7 per cent during the tenth five-year plan. Its mid-term forecast suggests an expected growth of 7.4 per cent in GDP during 2004-05 to 2008-09. Very recently, IMF has portrayed a sustained global recovery in World Economic Outlook. A significant shift has also been observed in Indian households from the lower income group to the middle-income group in recent years. The finance companies are also more aggressive in their marketing compared to previous years. Combining all these factors, one may visualize a higher growth rate in two-wheeler demand than presented in Table 1, particularly for the motorcycle segment. There is a large untapped market in semi-urban and rural areas of the country. Any strategic planning for the two-wheeler industry needs to identify these markets with the help of available statistical techniques. Potential markets can be identified as well as prioritized using these techniques with the help of secondary data on socio-economic parameters. For the two-wheeler industry, it is also important to identify the target groups for various categories of motorcycles and scooters. With the formal introduction of secondhand car market by the reputed car manufacturers and easy loan availability for new as well as used cars, the two-wheeler industry needs to upgrade its market information system to capture the new market and to maintain its already existing markets. Availability of easy credit for two-wheelers in rural and smaller urban areas also requires more focused attention. It is also imperative to initiate measures to make the presence of Indian two-wheeler industry felt in the global market.

5.4. Two wheeler companies and their Brands

Hero Honda Motors Ltd (HHML), Bajaj Auto Ltd (Bajaj Auto) and TVS Motor Company Ltd (TVS) account for over 80 % of the industry sales. The other key players in the two-wheeler industry are Kinetic Motor Company Ltd (KMCL), Kinetic Engineering Ltd (KEL), LML Ltd (LML), Yamaha Motors India Ltd (Yamaha), Majestic Auto Ltd (Majestic Auto), Royal Enfield Ltd (REL), Suzuki Motor Corporation and Honda Motorcycle & Scooter India (P) Ltd (HMSI).

Honda Motors Ltd (HHML) has brands such as Splendor, Super Splendor, Splendor NXG, CBZ X-treme, Hunk, Glamour, CD Deluxe, Passion, Pleasure, Passion plus, Splendor Plus etc.

For Bajaj Auto Ltd (Bajaj Auto) the motorcycles include branded models like Bajaj Platina, Bajaj Avenger DTS-1, Bajaj Pulsar DTS-1, Bajaj CT 100, Bajaj Discover, Bajaj Pulsar 220 DTS-Fi while scooters such as Chetak, Kristal DTS-I are the leading brands that make up the company's two wheeler market. A range of mopeds, scooters and motorcycles from the motorcycle manufacturer TVS Motor such as, Scooty, Scooty Pep Plus, TVS Victor Edge, TVS Star, TVS Star City, TVS XL Super, TVS Apache RTR and TVS Flame are some of the two wheelers that have made TVS one of the leading names to reckon with on the Indian two wheeler scene.

Yamaha Motor India is the Indian subsidiary of the Japanese automobile giant, Yamaha. The company has a limited presence on the Indian two-wheeler scene with models like Gladiator, Yamaha G5, Crux and Alba. However, its models are backed by the world-renowned Japanese

technology and are more fuel-efficient though more expensive as compared to other Indian two wheelers.

The brands of all of these manufacturers are considered for the study.

5.5. Indian two-wheeler industry

After facing its worst recession during the early 1990s, the industry bounced back with a 25 % increase in volume sales in FY1995. However, the momentum could not be sustained and sales growth dipped to 20 % in FY1996 and further down to 12 % in FY1997. The economic slowdown in FY1998 took a heavy toll of two-wheeler sales, with the year-on-year sales (volume) growth rate declining to 3 % that year. However, sales picked up thereafter mainly on the strength of an increase in the disposable income of middle-income salaried people (following the implementation of the Fifth Pay Commission's recommendations), higher access to relatively inexpensive financing, and increasing availability of fuel efficient two-wheeler models. Nevertheless, this phenomenon proved short-lived and the two-wheeler sales declined marginally in FY2001. This was followed by a revival in sales growth for the industry in FY2002. Although, the overall two-wheeler sales increased in FY2002, the scooter and moped segments faced de-growth. FY2003 also witnessed a healthy growth in overall two-wheeler sales led by higher growth in motorcycles even as the sales of scooters and mopeds continued to decline. Healthy growth in two-wheeler sales during FY2004 was led by growth in motorcycles even as the scooters segment posted healthy growth while the mopeds continued to decline. Figure below presents the variations across

various product sub-segments of the two-wheeler industry between FY1995 and FY2004.

5.6. Segmental Classification and Characteristics

The three main product segments in the two-wheeler category are scooters, motorcycles and mopeds. However, in response to evolving demographics and various other factors, other sub segments emerged, viz. scooterettes, gearless scooters, and 4-stroke scooters. While the first two emerged as a response to demographic changes, the introduction of 4-stroke scooters has followed the imposition of stringent pollution control norms in the early 2000. Besides, these prominent sub-segments, product groups within these sub-segments have gained importance in the recent years. Examples include 125cc motorcycles, 100-125 cc gearless scooters, etc. The characteristics of each of the three broad segments are discussed in Table 2 below.

5.7. Segmental Market Share

The Indian two-wheeler industry has undergone a significant change over the past 10 years with the preference changing from scooters and mopeds to motorcycles. The scooters segment was the largest till FY1998, accounting for around 42 % of the two-wheeler sales (motorcycles and mopeds accounted for 37 % and 21 % of the market respectively, that year). However, the motorcycles segment that had witnessed high growth (since FY1994) became larger than the scooter segment in terms of market share for the first time in FY1999. Between FY1996 and 9MFY2005, the motorcycles segment more than doubled its share of the two-wheeler industry to 79 % even as the market shares of scooters and mopeds stood lower at 16 % and 5 %, respectively.

6. METHODOLOGY

6.1. Attributes Selection

The respondents cited about twenty attributes, but only ten attributes namely

Table 2: Two-wheelers: comparative characteristics

CHARACTERISTICS	SCOOTER	MOTORCYCLE	MOPED
Price*(Rs. as in January 2005)	> 22,000	> 30,000	> 12,000
Stroke	2-stroke, 4-stroke	Mainly 4-stroke	2-stroke
Engine Capacity (cc)	90-150	100, 125, > 125	50, 60
Ignition	Kick/Electronic	Kick/Electronic	Kick/Electronic
Engine Power (bhp)	6.5-9	7-8 and above	2-3
Weight (kg)	90-100	> 100	60-70
Fuel Efficiency (kms per litre)	50-75	50-80+	70-80
Load Carrying	High	Highest	Low

*Ex-showroom Mumbai

1. Fuel Efficiency (FE),
2. Style and Design (SD),
3. Brand image (BI),
4. Price (P),
5. Power and Pickup (PP),
6. Durability (D),
7. Maintenance Cost (MC),
8. Resale Value (RV),
9. Add on Features (AF), and
10. Environment Friendly (EF) were taken into consideration for the convenience of the study.

6.2. Sample Respondents

The student sample has been used in this study.

6.3. Sample Size

The sample size is reduced into 300. Besides, 80 respondents provided their opinions for pre-testing questionnaire but they are not included here.

6.4. Data Collection Method and Procedures

Data were collected from students of different years and departments, Annamalai University, Chidambaram, India. A set of structured pre tested questionnaires was used. The data were collected from the 15 hostels including three female hostels of the said University on random basis. In the surface page of the questionnaire, the purpose of the study is mentioned. The respondents were kept informed regarding the attributes of two wheelers through the seven point scale ranging from Very Strongly Believe to Very Strongly Disbelieve (7 to 1). This scale is widely used in comparing brand, product and company images

(Malhotra et al., 1996). There were 300 questionnaires for overall evaluation.

6.5. Data Analysis Procedures

Collected data were analyzed using statistical tools of computer programs viz. Microsoft Excel and SPSS. The findings of the study are presented in a manner that meets the purpose of the study. Findings of the Study The data from the survey were coded and entered for statistical analysis. The data obtained were analyzed by using "Factor Analysis" for identification of the 'key factors' preferred by the consumers. Factor analysis identifies common dimensions of factors from the observed variables that have a high correlation with the observed variables.

7. ANALYSIS AND INTERPRETATION

7.1. Correlation Matrix Analysis

For confirmatory factor analysis, computation of correlation is essential. It is done to determine the appropriateness of the factor analytic model. If there is high correlation (≥ 0.8) between two independent variables those should be excluded from the factor analysis. The mentioned correlation matrix (Table 3) has displayed correlation between the variables mean and standard deviation of the scale items and reliability alpha coefficient for each variable. This table indicated that all of the variables are significantly Correlated to each other. The table also has indicated that all the scale items used in this study for data collection were reliable as the coefficient alpha value for none of the value is below 0.06 as suggested by Churchill and Peter (1984). For

Table 3: Correlations matrix, descriptive statistics and scale's reliability

VA	FE	MC	SD	AF	D	P	RV	PP	BI	EF	MV	SD	AD	N
FE	1.000	.537	.222	.377	.402	.585	.455	.247	.567	.047	4.9700	1.5483	.7595	300
MC		1.000	.224	.270	.423	.505	.305	.258	.397	.008	4.6900	1.2078	.7750	300
SD			1.000	.200	.218	.164	.249	.431	.158	.150	4.1833	1.5245	.7969	300
AF				1.000	.324	.368	.416	.272	.357	.089	4.3067	1.4900	.7801	300
D					1.000	.413	.348	.369	.195	-.092	4.2367	1.0477	.7832	300
P						1.000	.381	.225	.497	.098	4.7833	1.2550	.7673	300
RV							1.000	.255	.443	.141	4.5133	1.2335	.7724	300
PP								1.000	.247	.138	3.9600	1.2370	.7845	300
BI									1.000	.263	5.4033	1.3139	.7679	300
EF										1.000	5.4400	1.4306	.8192	300

Correlation is significant at the 0.01 level (2-tailed). N of Cases = 300.0, N of Items = 10, Alpha = .7988, Standardized item alpha = .8049, MV= Mean Value, SD=standard Deviation, AV= alpha Value, N= number of Respondents

factor analysis, correlation matrix is necessary for testing significance and Cronbach's Alpha help to coefficient of internal consistency in difference factors, which produce a reliable scale. From the correlation matrix table one it is clear that all are Significant at $P < 0.05$ and Alpha values are ≥ 0.7 for each individual item (Nunnally, 1994; Kumar et al., 2005; Azam, 2004; 2005). The overall Cronbach Alpha values were calculated as .7988 for the ten explained variables, which has been expressed as highly satisfactory.

7.2. Anti-image Correlation

The anti image correlation matrix has been used to asses the sampling adequacy of each variable for mentioned product. The measures of sampling adequacy have been displayed on the diagonal of the anti-image correlation matrix (Table 4). The variables with a measure of sampling accuracy that falls below the acceptable level of 0.5 should

be excluded from the analysis for getting actual prediction.

Inspection of the anti image correlation matrix reveals that all measures of sampling accuracy are well above the that no correlation value is < 0.5 each and every correlated value is acceptable ≥ 0.5 . Therefore, each variable could be used for confirmatory factor analysis without reservation.

7.3. Confirmatory Factor Analysis (CFA)

Factor analysis is a generic term for a family of statistical techniques concerned with the reduction of a set of observable variables in terms of a small number of latent factors. It has been developed primarily for analyzing relationships among a number of measurable entities (such as survey items or test scores). The underlying assumption of factor analysis is that there exist a number of

Table 4. Anti-image correlation

VA	FE	MC	SD	AF	D	P	RV	PP	BI	EF
FE	.854									
MC	-.235	.881								
SD	-6.4E-02	-8.2E-02	.760							
AF	-6.3E-02	2.140E-02	-3.1E-02	.909						
D	-.107	-.189	-2.2E-03	-.106	.808					
P	-.253	-.205	3.07E-02	-.104	-.180	.879				
RV	-.144	2.746E	-.104	-.209	-.156	-2.89E-02	-.884			
PP	2.6E-02	-3.63E-02	-.347	-8.924E-02	-.252	3.014E-02	6.796E-04	-.772		
BI	.315	-.106.161	7.229E-02	-9.654E-02	.161	-.189	-.192	-9.653E-02	.814	
EF	9.8E-02	5.823E-02	-.109	-6.548E-03	.159	-5.709E-02	-6.541E-02	-9.011E-02	-.228	.574

unobservable latent variables (or “factors”) that account for the correlations among observed variables, such that if the latent variables are partial out or held constant, the partial correlations among observed variables all become zero. In other words, the latent factors determine the values of the observed variables (Habib et al., 2005). The obtained data for the study have been analyzed following Confirmatory Factor Analysis” for identification of the ‘key factors’ preferred by the respondents. Factor analysis has been done systematically to find out the actual variables under each construct.

7.4. Rotated Component Matrix

Principal component factor analysis with varimax rotation (Table 5) was performed on the survey data. Principal Component Analysis (PCA) is the commonly used method for grouping the variables under few unrelated factors. Variable with a factor loading ≥ 0.5 are grouped under a factor. A factor loading is the correlation between the original variable with the specific factor and

the key to understanding the nature of that particular factor (Debasish, 2004). Table 4 has provided the varimax rotated factor loadings against the mentioned 10 variables. Moreover, factor analysis using Varimax rotation finds three derived factors. According to Table 5, Factor 1 (F1) has an Eigen value of 3.828 and explains 38.281 % of total variance. The Eigen values of the second factor, and third factor are 1.221 and 1.152 with explained variance 12.206 % and 11.524 % respectively. The cumulative variance accounted for by all the three factors was 62.011 %.

7.5. Scree Plot Analysis

Scree Plot is formed by plotting the number of factors against their respective Eigen values (Hackett & Foxall 1999). In the present analysis (Figure 1), an elbow in the Scree Plot suggests the retention of three factors (factors one to three may be connected by a line in a more vertical plane, whilst factors four to ten join in a more horizontal plane). Together the three factors

Table 5. Rotated component matrix and total variance explained

Variables	Component		
	1	2	3
FE	.824	9.947E-02	-4.279E-02
P	.796	5.893E-02	-4.279E-02
BI	.748	2.637E-02	.375
MC	.685	.175	-.221
RV	.617	.253	.153
AF	.547	.269	5.928E-02
D	.498	.426	-.462
SD	9.303E-02	.806	.111
PP	.196	.804	1.695E-02
EF	9.773E-02	.164	.862
Eigenvalue	3.828	1.221	1.152
% of Variance	38.281	12.206	11.524
Cumulative %	38.281	50.487	62.011

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 5 iterations.

accounted for 62.011 % of the cumulative variance. The Eigen values for the three factors were: factor 1 (3.828), factor 2 (1.221), and factor 3 (1.152).

8. DISCUSSION OF FINDINGS

The result of the initial estimation of the CFA was shown a well-fitting model. From the output of KMO and Bartlett's Test (Table 6) it was absolutely clear to the researcher that samples taken were absolutely accurate and sampling accuracy was 0.839, which was far greater than 0.6 (Coakes & Steed, 2001).

(From the Rotated Components Matrix (Table 5) it is found that Factor one (F1) was loaded with the significant variables Fuel Efficiency (FE) with loading 0.824, Price Rate (P) with loading 0.796, Brand Image (BI) with loading 0.748, Maintenance Cost (MC) with loading 0.685, Resale value (RV) with loading 0.617, Add on Features (AF) with loading 0.547, and Durability (D) with

loading 0.498 For Factor two (F2) the significant variables were: Style and Design (SD) 0.806, Power and Pickup (PP) 0.804, and Finally for Factor three (F3), the significant variables is Environment Friendliness (EF) with loading value 0.862.

From the factor analysis it is clear that Fuel Efficiency, Price Rate, Brand Image, Maintenance Cost, Resale value, Add on Features, and Durability are grouped under the component one. It is also found that variables Style and Design, and Power and

Table 6. KMO and Bartlett's test

KAISER-MEYER-OLKIN MEASURE OF SAMPLING ADEQUACY.		.839
Bartlett's Test of Sphericity	Approx. Chi-Square	837.668
	df	45
	Sig.	.000

Pickup, are grouped under component two like this Environment Friendliness came under the component three.

9. IMPLICATIONS OF THE RESEARCH FINDINGS

This study was focused on the identification of different influential variables that lead consumers to choose a durable product. The research findings may help producers, policy-makers to understand what key factors helped implement successful competitive strategies in the competitive market. These results are likely to help academicians and marketers to collect information and plan appropriate competitive strategies based on the three above components, which they prefer to develop. The selection of appropriate target markets, the development of strong product image, promotion and operation for domestic market may be recommended as specific marketing plans. More specific implication

supported by consumers in this study is that product management organizations might need to play an important role as facilitators between local company and agencies for market development. The establishment of effective linkages between local organization and agencies is recommended in order to improve market competitiveness in the long run. Lastly, establishing effective cost strategies in providing different levels of quality and various types of attribute experiences can be recommended for developing market as a competitive business for the country. Finally it can be said that marketers stand to consumer behaviors with respect to their brand, for example brand loyalty and positive word-of-mouth (Kim, 2002). Homogeneous respondents (as real consumer) were used for collecting data for this study. By this study the academicians, therefore, can get an idea about the theory application in marketing research.

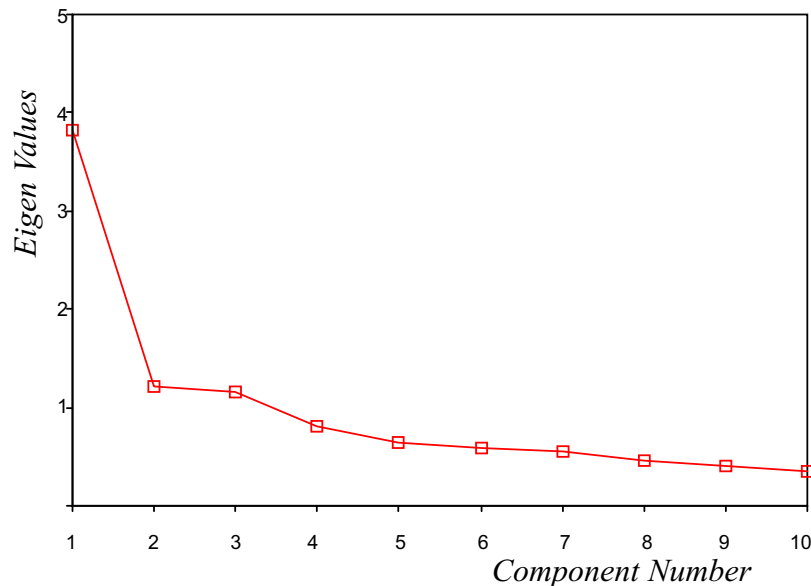


Figure 1. Scree plot of the Factor analysis

10. LIMITATIONS AND FURTHER RESEARCH

Different limitations are found in this study and they should be addressed to encourage more sound research in the future. This study investigated the influential variables that lead consumers to perceive quality perception with brand image and product attributes perspectives in India. A study of a representative sample of general users can vary the findings of this study that are applicable to the general people. Only 300 consumers were taken as respondents for the study from the Annamalai University, Chidambaram, India. Other categories' consumers may express different perceptions, attitudes, and behaviors concerning the issues presented in this study. The use of student subjects inhibits the generalization of these findings to other populations. Further research may be conducted to assess executives' perceptions of different brands benefits and risks for each attribute of soft drink with other categories. The surveyed data were only collected from Annamalai University, Chidambaram, India.. This study somewhat limited in its selection of observed variables. Even if those observed variables were selected based on the survey, other variables may exist to achieve further insights of product selection. This study did not include any preferences and satisfaction variables to see what and how much choice works in the market.

11. CONCLUSION

Basically this study considered the effect of intangible and tangible attributes on brand image development as well as its relationship to consumer preferences. There is a strong

relationship between brand image and each of the preference measures utilized in the study. Across this category, the brand with the greater market share yielded substantially higher levels of brand acceptability. In turn, the brand with the higher image in the category generated significantly greater preference. The findings highlight the need to gain an understanding of the impacts of taken attributes and their contribution to brand image and preference under different components. It might have been expected that brand name may have greater importance than overall preference for the brand, given the less abstract nature of this product category. This finding should be viewed with caution, since the products used in the study were non-durable products. Finally the measurement and management of brand image have become top priority marketing issues in recent years, as evidenced by the growing literature on the subject. Most articles automatically assume that brand image has an impact on a brand's performance. However, it does not make sense economically to invest a firm's scarce resources in strategies to add value if the value does not translate into preferences and purchase behavior. Firms need empirical evidence of the consequences of brand image. The present study demonstrated that selected ten attributes together help to build up brand image in the market. From the statistical analysis it is found that ten attributes come under three components which create the product image and indicate product perceived quality perception.

КОМПЕТАТИВНИ УТИЦАЈИ КУПЧЕВЕ ПРОЦЕНЕ БРЕНДА, ПОКАЗАТЕЉА КВАЛИТЕТА ПРОИЗВОДА И ОСТВАРЕНОГ КВАЛИТЕТА НА ТРЖИШТУ ДВОТОЧКАША У ИНДИЈИ

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Извод

Циљ студије је да се емпиријски тестира концептуализација купчеве процене слике коју сам бренд оставља, става о брендovima као и оствареног квалитета у случају произвођача двочкаша, који се на тржишту Индије сматра веома важним производом. Резултати ове студије могу бити од користи академској јавности, произвођачима, као и другим истраживачима у области примењених наука.

Кључне речи:Процена купаца, Слика о бренду, Квалитет

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