

# Self-Image Congruence of Motorcycle Brands – A Correspondence Analysis Purview

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## ABSTRACT

A brand gets its personality from how manufacturers or advertisers have highlighted them. But for sure, every buyer will have an imagery regarding products or brands which are familiar to them. There are many motorcycles brands in the market and every brand carries a personality with it. This study is to examine the correspondence between motorcycle brands and the personality traits associated with each brand. An instrument was framed to collect relevant data which can further be analysed with modern statistical tools to check the correspondence with associated personality. Almost all major brands of two wheelers are taken into account for this study. The results clearly draw the correspondence between the brands and the associated personality traits.

**Keyword:** Motorcycle Brands, Personality Traits, Correspondence Analysis, Self-image

## INTRODUCTION

Some motorcycle brands that dominate in global motorcycle market are Honda, Yamaha, Suzuki, etc. whereas the Indian market shows the dominance of players like Hero Honda, Honda, Bajaj Auto Ltd, TVS Motor, and Yamaha.

Motorcycle brands' designs vary greatly to suit a range of different purposes such as longdistance travel, commuting, cruising, sport including racing, and off-road riding. Motorcycle brands differ in their fashionable, adventurous, economical, comfortable, performance (fuel mileage, service quality, power) etc. Each motor cycle brand carries a personality with them and customers purchase motorcycles which they find matching their personality, like youngsters prefer sports bike brands whereas middle aged people & professionals prefer commuter & cruisers motorcycle brands.

## LITERATURE REVIEW

Punyatoya (2011) opined that brand personality is seen as the set of human characteristics associated with a

brand. It carries the symbolic meaning of the brand. Whether it is a low or high involvement product, brand personality will definitely improve the consumer brand preference and purchase intention. This article presents a brief literature review of the concept of brand personality and its relationship to consumer brand preference and purchase intention. The study also emphasised effect of brand personality on high and low involvement products preference and purchase. The paper also talks about how famous endorsers and strong brand argument can improve brand personality of low and high involvement products respectively.

Brand personality dimensions of wholesomeness and successfulness are mediated through prestige to predict the consumer's identification with the team. The two brand personality dimensions of imaginativeness and toughness positively influence identification with the team while successfulness has a negative influence on identification with the team. Once a consumer identifies with the team quasi-brand, retail spending and viewership increase. Carlson, Todd Donavan, and Cumiskey (2009) investigate the relationships between the brand personality of a sports team and the related consumer outcomes of identification and retail spending.

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Jamal and Goode (2011) provide an overview of self-image product image congruity (commonly known as self-image congruence) which can affect consumer's product preferences and their purchase intentions. Self-image congruence can also facilitate positive behaviour and attitude toward products. Diamantopoulos, Smith, and Grime (2005) investigate empirically the impact of brand extensions on brand personality, using Aaker's scale to measure the latter. Experimental study shows manipulating extension fit (good/poor fit), controlling for brand familiarity, and including a control group.

Donahay and Rosenberger III (2007) opined that the effectiveness of image transfer from a Formula One (F1) team to the principal sponsor, measuring the brand-personality congruency between the two. Based on results from a survey of 160 Australian F1 motor sport fans, support was found for the major influence of a functional-based sponsor relationship and the minor influence of a F1 team's (winning) performance on the efficiency of the image-transfer process. Further, fan identification had a significant covariate effect, allowing the F1 team's performance influence to emerge. Kathiravanaa, Panchanathamaa, and Anushanb (2010) tested empirically the conceptualisation of consumer evaluation of brand image, brand attitude, and perceived quality of a two-wheeler, which is considered as a durable product. Achouri and Bouslama (2010) identified that their research belongs to the field of the analysis of the consequences of congruence between brand personality and self-image. The consequences taken into account in this study are consumer's satisfaction and loyalty. It presents a literature review on the study of impact of the congruence between brand personality and self-image on the four dependant variables considered in this research: satisfaction, attitude, preference, and behavioural intentions.

Kressmann, Sirgy, Herrmann, Huber, Huber, and Lee (2006) opined that their paper is to test a model, dealing with direct and indirect effects of self-image congruence on brand loyalty. The model suggests that self-image congruence positively affects brand loyalty directly and indirectly through functional congruity, product involvement, and brand relationship quality. They chose automobiles because cars are high in conspicuousness (therefore are likely to be evaluated using symbolic criteria) and are used across a variety of situations. The model was mostly supported by the data. First, the results

document the paramount importance of self-congruity in predicting brand loyalty. Second, our study integrated the emerging construct of brand relationship quality into self-congruity theory. Third, in regards to the hypothesized effect of self-congruity on functional congruity, the data were supportive.

## OBJECTIVES

The purpose of the study is to examine the correspondence between motorcycle brands and their personality traits associated with each brand.

## RESEARCH METHODOLOGY

Descriptive research design is used for the execution of this study. A descriptive research is one which portrays accurately the characteristics of a particular group, situation or individual. Thus this design aptly projects the study's findings on a larger population. The population for this study mainly includes people who are motorcycle owners and users. The approach adopted was non-probability sampling related to convenience. A questionnaire was used for collecting relevant data in order to achieve the research objectives. Opinion from experts and information from previous studies were considered while preparing the questionnaire. Rating scale was used to rate the parameter. A sample of size of 148 was estimated based on the variance of different major parameters and conveniently rounded off to 150 respondents. The data collected was then analysed using high end statistical tools including correspondence analysis.

The questionnaire had two parts where the first part mainly concentrated on the general categorical demographic information and the basic details about the respondent. Secondly questions pertaining to the extraction of personality traits were added. Thus a set of 12 personality traits were filtered from Malhotra and Dash (2012). This traits were commonly present in all the six Motorcycle brands so that the owners and users can examine it properly. The 12 personality traits used in the questionnaire are appealing, fashionable, adventurous, economical, comfortable, dominating, sincere, rugged, confident, contemporary, fancy, and free spirited. The characteristics of these personality traits are self-explanatory.

The tool used for this analysis is correspondence analysis. It is an exploratory technique for studying the two-way and multi-way tables. It contains some measure of correspondence between the rows and columns. It is similar to factor analysis conceptually, but applies to categorical rather than continuous data. The output is generalised in a two-dimensional graphical form.

Correspondence analysis creates orthogonal components and, for each item in a table, a set of scores is calculated on a contingency table,  $c$ , of size  $m \times n$  where  $m$  is the number of rows and  $n$  is the number of columns.

## DATA ANALYSIS AND DISCUSSION

The collected data was then analysed with appropriate statistical tools. The first thrust was given to have a general idea regarding the basic classificatory data.

**Table 1: Descriptive Statistics**

<i>Age</i>		
	<b>Frequency</b>	<b>Percent</b>
less than 20	3	2.0
20-30	91	60.7
30-40	33	22.0
40-50	12	8.0
greater than 50	11	7.3
<b>Total</b>	150	100.0
<i>Occupation</i>		
Self-employee	23	15.3
Govt. employee	20	13.3
Private employee	39	26.0
Student	64	42.7
Others	4	2.7
<b>Total</b>	150	100.0

Source: Survey Data

Descriptive statistics of age and occupation is listed in Table 1. Majority of respondents in this study fall in the age group 20 to 30, 22% of them are in the age group 30 to 40. The majority respondents in this study are students, 26% of respondents are private employees, and 15.3% of them are self-employees.

The details about the brand ownership and the type of two wheeler usage are described in Table 2. Among the total respondents, majority of them own Yamaha brands,

18% of respondents own Bajaj and Hero brands, others own brands like TVS, Suzuki, Honda and majority say that they use motorcycle for normal commuting while remaining say that they use it for routine travelling, official, and racing.

**Table 2: Descriptive Statistics**

<i>Brand Ownership</i>		
	<b>Frequency</b>	<b>Percent</b>
Bajaj	28	18.7
Yamaha	37	24.7
Hero	27	18.0
Honda	26	17.3
TVS	14	9.3
Suzuki	6	4.0
Others	12	8.0
<b>Total</b>	150	100.0
<i>Purpose of Motorcycle Usage</i>		
Local Commuting	104	69.3
Routine Travelling	35	23.3
Official	10	6.7
Sporting	1	.7
<b>Total</b>	150	100.0

Source: Survey Data

## Correspondence Analysis Detailing the Association between Brands and Their Personality

Correspondence analysis is attempted by taking the brand names and the personality traits associated with the brands. The details of the correspondence table, thus generated are listed in Table 3. In a typical correspondence analysis, a cross-tabulation table of frequencies is first standardised, so that the relative frequencies across all cells sum to 1.0. One way to state the goal of a typical analysis is to represent the entries in the table of relative frequencies in terms of the distances between individual rows and/or columns in a low-dimensional space.

Table 3 shows the sum of preferred response of each brand on different personality traits. Brands form the columns and personality traits form the rows of the table. The table also contains one supplementary row and one supplementary column called active margin which represents the row and column total, respectively. This correspondence table

is the input for the further computation of the distance between the object for graphical representation of the objective.

Table 4 represents the inertia per dimension and shows the decomposition of the total inertia along each

dimension. Two dimensions account for 88% of the total inertia. Adding a third dimension adds only 6.8% to the accounted-for inertia. Thus, it is decided to use a two-dimensional representation.

Table 5 displays the contributions involving the column

**Table 3: Correspondence Table**

<i>Image</i>	<i>Brand</i>						
	<i>Bajaj</i>	<i>Yamaha</i>	<i>Hero</i>	<i>Honda</i>	<i>TVS</i>	<i>Suzuki</i>	<i>Active Margin</i>
Appealing	84	77	96	104	49	79	489
Fashionable	67	110	24	92	105	108	506
Adventure	20	127	17	66	21	28	279
Economic	117	73	133	128	71	41	563
Comfort	113	68	107	110	45	69	512
Dominant	69	77	82	70	41	39	378
Sincere	61	58	83	71	50	53	376
Rugged	12	33	15	26	71	42	199
Confident	79	48	63	58	33	36	317
Contemporary	33	74	37	69	48	50	311
Fancy	22	91	10	54	68	97	342
Spirited	22	35	22	53	23	45	200
Active Margin	699	871	689	901	625	687	4472

Source: Survey Data

**Table 4: Proportion of Inertia**

<i>Dimension</i>	<i>Singular Value</i>	<i>Inertia</i>	<i>Chi Square</i>	<i>Sig.</i>	<i>Proportion of Inertia</i>		<i>Confidence Singular Value</i>	
					<i>Accounted for</i>	<i>Cumulative</i>	<i>Standard Deviation</i>	<i>Correlation</i>
1	.307	.094			.647	.647	.013	.127
2	.186	.035			.238	.886	.016	
3	.100	.010			.068	.954		
4	.064	.004			.028	.982		
5	.051	.003			.018	1.000		
Total		.145	649.228	.000 <sup>a</sup>	1.000	1.000		

a. 55 degrees of freedom

Source: Survey Data

Table 5: Overview Column Points

Brand	Mass	Score in Dimension		Inertia	Contribution				
		1	2		Of Point to Inertia of Dimension		Of Dimension to Inertia of Point		
					1	2	1	2	Total
Bajaj	.156	-.343	.042	.021	.196	.008	.860	.013	.873
Yamaha	.195	.266	-.300	.032	.147	.507	.429	.546	.975
Hero	.154	-.477	.028	.037	.374	.004	.948	.003	.951
Honda	.201	-.059	-.081	.004	.007	.038	.161	.305	.467
TVS	.140	.294	.290	.028	.129	.340	.438	.426	.864
Suzuki	.154	.300	.152	.023	.147	.102	.613	.157	.771
Active Total	1.000			.145	1.000	1.000			

a. Principal normalisation

Source: Survey Data

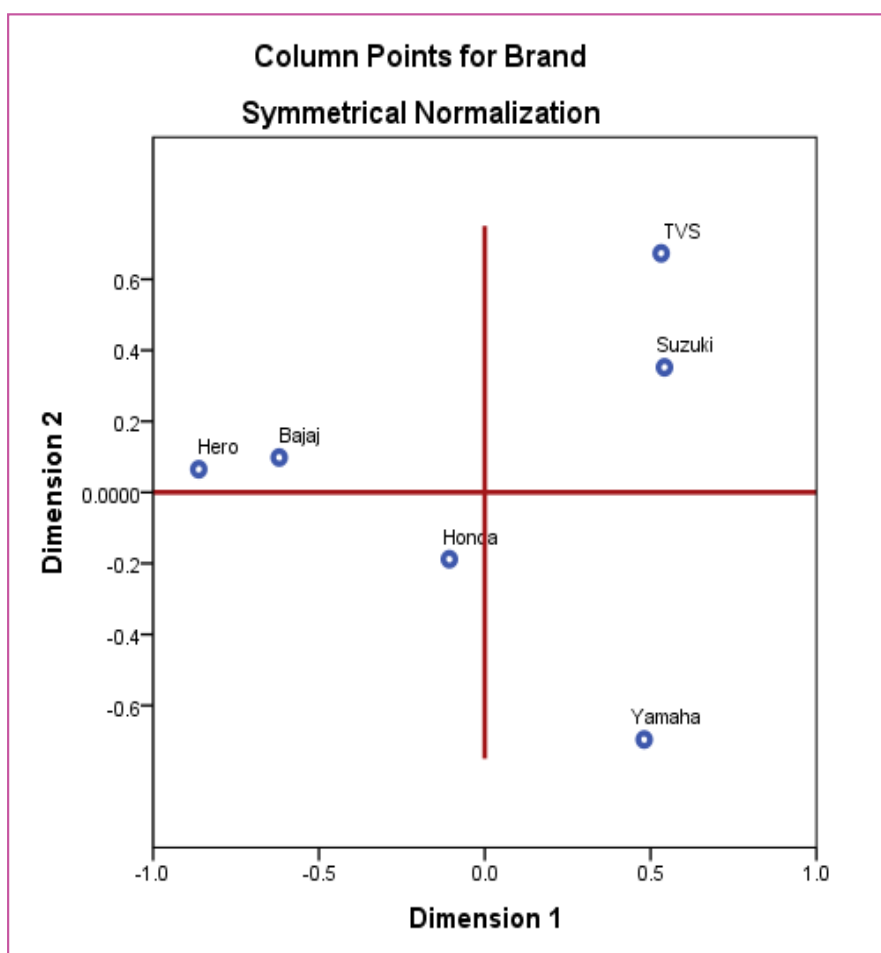


Fig. 1: Column Points for Brands Symmetrical Normalisation

points. Brands TVS and Suzuki contribute the most to the first dimension, whereas Yamaha and TVS explain a large amount of the inertia for the second dimension. Fig.

1 represents that brands TVS and Suzuki group together at the right, whereas brand Yamaha in the lower half right of the plot and brand Honda is near the origin. Hero and Bajaj have the similar nature.

Table 6: Overview Row Points

Image	Mass	Score in Dimension		Inertia	Contribution				
		1	2		Of Point to Inertia of Dimension		Of Dimension to Inertia of Point		Total
					1	2	1	2	
Appealing	.109	-.148	.010	.004	.025	.000	.673	.003	.676
Fashionable	.113	.340	.105	.016	.139	.036	.836	.080	.916
Adventure	.062	.345	-.613	.031	.079	.678	.236	.745	.981
Economic	.126	-.339	.031	.016	.154	.003	.888	.007	.895
Comfort	.114	-.282	.021	.010	.097	.001	.903	.005	.908
Dominant	.085	-.196	-.082	.005	.034	.016	.693	.121	.814
Sincere	.084	-.162	.061	.003	.024	.009	.663	.095	.758
Rugged	.044	.483	.429	.022	.111	.237	.479	.379	.858
Confident	.071	-.281	.018	.007	.060	.001	.798	.003	.801
Contemporary	.070	.165	-.067	.003	.020	.009	.728	.118	.846
Fancy	.076	.552	.062	.025	.248	.009	.934	.012	.946
Spirited	.045	.137	.007	.004	.009	.000	.219	.001	.220
Active Total	1.000			.145	1.000	1.000			

a. Principal normalisation

Source: Survey Data

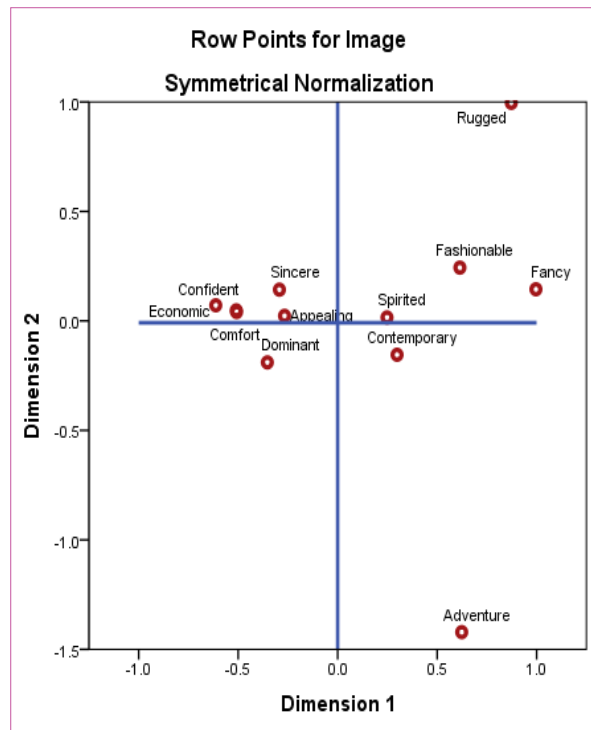


Fig. 2: Row Points for Image Symmetrical Normalisation

Table 6 shows the contributions of the row points to the inertia of the dimensions and the contributions of the dimensions to the inertia of the row points. Rugged and

fancy both contribute a substantial portion to the inertia of the first dimension. Rugged and fashionable contribute the largest amount to the inertia of the second dimension. Fig.

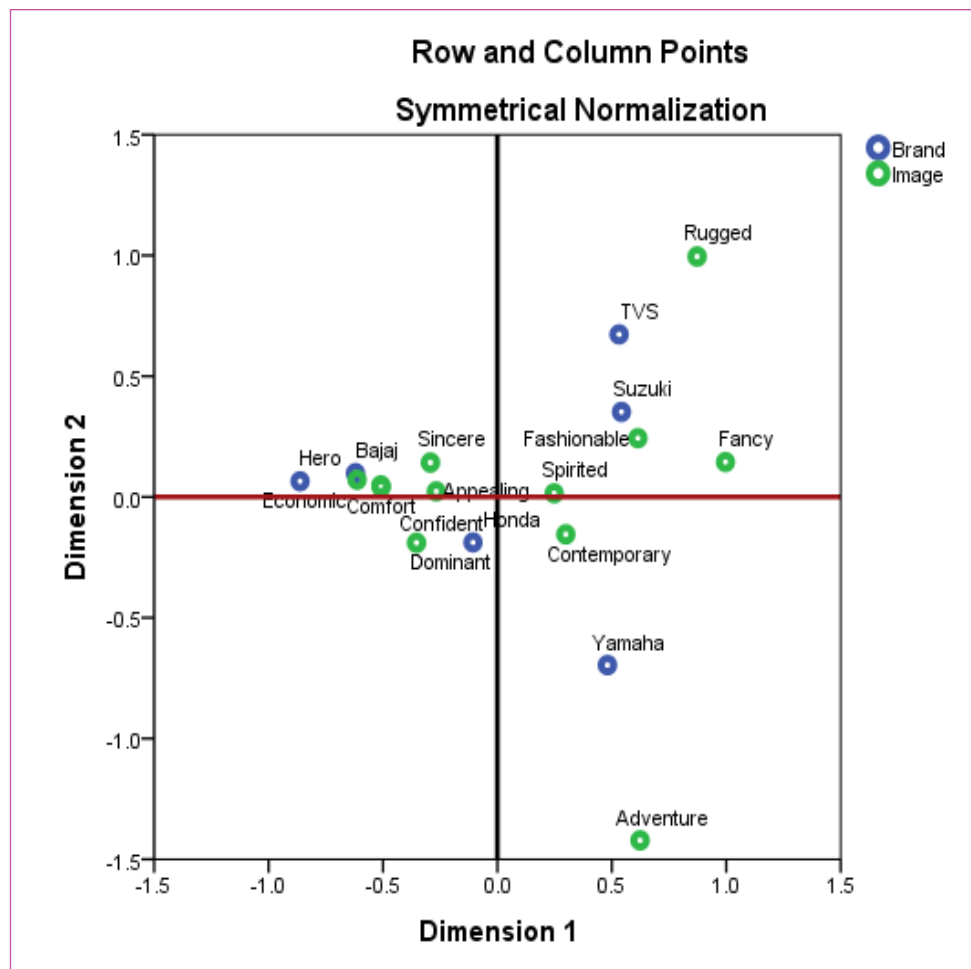


Fig. 3: Row and column Points Symmetrical Normalisation

2 displays that dominant contributes very little to either dimension. The row points plot shows that appealing and dominant are both very close to the origin, indicating that they differ little from the average row profile. Dimension 1 consist of brands associated with style traits like fancy, fashionable, free spirited, and dimension 2 consists of brands associated with reliability traits like economic, confident, and sincere.

Fig. 3 represents that brands like Yamaha, TVS, Suzuki highlight mainly the style aspects of the brand while other brands highlight their reliability. From this it has been found that the TVS brand is closest to the “rugged” personality trait, Suzuki brand closest to the “fashionable, free spirited, fancy” personality traits, Yamaha brand is close to the “contemporary, adventures” personality traits, and other brands like Hero, Bajaj, Honda have similar personality traits like economical, sincere, confident, comfort, dominant, and appealing. Each individual carries some personality traits with them, brands also carry personality. Consumers purchases products of brands which match their personality. Enhancing the relationship between

## CONCLUSION

Most of the motorcycle brands are associated with style traits and reliability traits. Rugged and fancy both contribute a substantial portion to the inertia of the first dimension. Rugged and fashionable contribute the largest amount to the inertia of the second dimension. Dominant contribute very little to either dimension. TVS brand is closest to the “rugged” personality trait, Suzuki brand closest to the “fashionable, free spirited, fancy” personality traits, Yamaha brand is closest to the “contemporary, adventures” personality traits, and other brands like Hero, Bajaj, Honda have similar personality traits like economical, sincere, confident, comfort, dominant, and appealing. Each individual carries some personality traits with them, brands also carry personality. Consumers purchases products of brands which match their personality. Enhancing the relationship between

personality traits and motorcycle brands in advertisement helps increase their demand in the market.

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