

# The impact of 'Brand equity' determinants on consumers' purchase decisions. A case study of the processed food sector in the national capital region of India

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## Key Words

Brand equity, processed food, Brand resonance

## Abstract

*Empirical studies on consumption patterns provide important insights into the theoretical aspects of consumer demand, through highlighting the changing habits and preferences of consumers over the years. After seventh five year plan when the Indian economy had crossed the Hindu growth rate and especially after the implementation of GLP (Globalization, Liberalization, and Privatization), the economy has been experiencing a healthy growth of per capita income. This has given a boost to the food processing industries to grow since the Engel's elasticity of demand for processed food has been found to be more than one (Mukund 2010). The more than one Engel's elasticity of demand categorises processed food items as luxurious items and it further tells that Indian consumers will expend more and more on processed food items as their income increases. The present study examines the determinants of brand equity in the perspective of processed food products in India. The finding suggests that the Indian consumers have started recognizing the processed food brands and are showing their preferences towards certain brand fulfilling their appetite. However for different determinants of brand equity, the magnitudes of preferences are varying significantly.*

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## Introduction

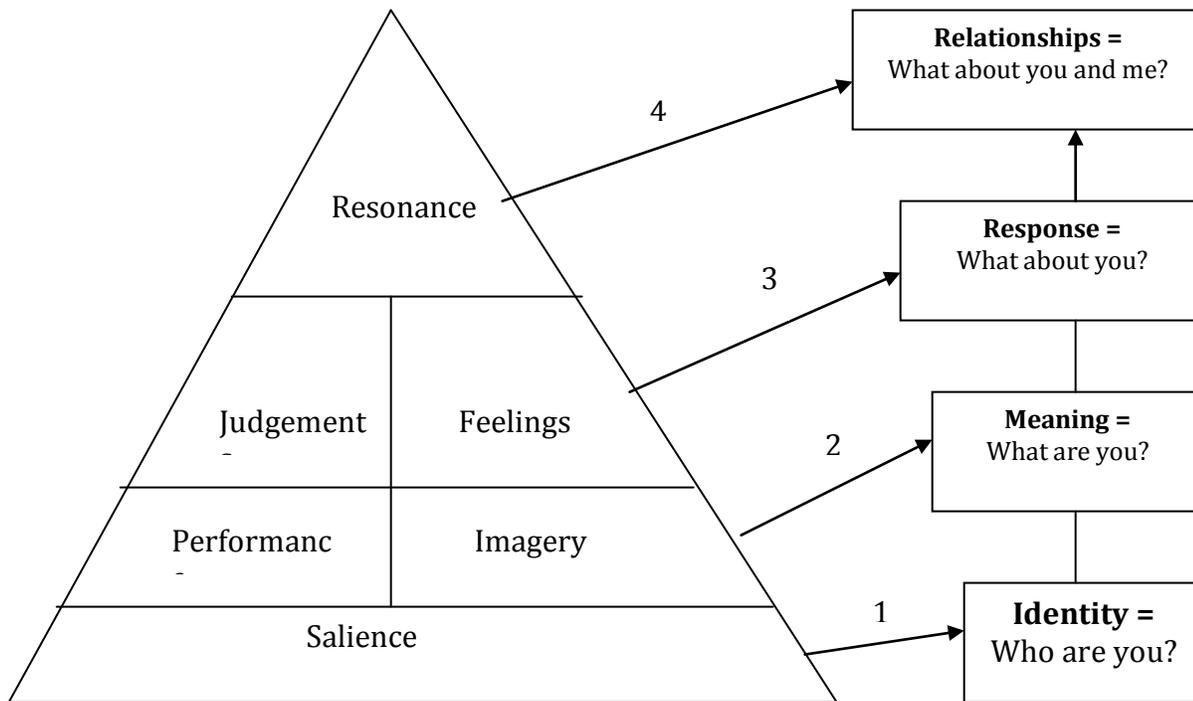
Empirical studies on consumption patterns always explain some important insights about consumer demand through highlighting their changing habits and preferences. As economic growth takes place, the consumer's preferences change accordingly with the increasing monetary as well as real income. A significant increase in the per capita total consumer expenditure (proxy for total income) has been noted in India both at current and constant prices. This increase in the total per capita income of Indians has given a boost up for the food processing industries to grow in India, since the Engel's elasticity of demand for processed food has found to be more than one (Mukund 2010). The more than one Engel's elasticity of demand, categorise processed food items as the luxurious items and it further tells that Indian consumers will expend more and more on processed food items as their income will increase. In other words the more than one Engel's elasticity of demand for any commodity means that the percentage of consumption expenditure of a consumer on the particular commodity will increase more than the percentage increase in the disposable income of the consumer. The primary sector (agriculture and allied industries) plays a vital role in Indian economy and it is regarded as the 'back bone' of the economy. India is enjoying the leading place in the world in the production of horticulture products

and dairy products, the raw materials for the food processing industry. Apart from these the production of other raw materials for food processing industry is also at very good level in India. For example India is the second largest producer of fruits & vegetable in the world accounting for almost 10% of global fruits & vegetable production (annual report, 2006-07, MFPI). India produces 82 mm tones of vegetable (10.9% of global production), and 47 mm tones of fruits (8.4% of global production). As defined by ministry of food processing industry, the product head fruits and vegetable processing consists of five products- dried and persevered vegetable, mango pulp, pickle and chutney and other processed fruits and pulses. Processing for fruits & vegetable is categorized as primary processing - sorting, grading, packaging of fresh fruits & vegetable, and secondary processing - conversion into value added products like juice, concentrates, pickles, jams, chutneys, squashes, etc. The present study makes an attempt to validate the different brand equity determinant in case of processed food and then to assess their impact on brand resonance on the basis of perceived consumer perception in India.

### Theoretical Model

The brand equity is a multi-dimensional concept; various models of brand equity have been propounded by the earlier researchers in their respective works. Aaker Model and the Customer-Based Brand Equity (CBBE) model are among the most common models of brand equity. As per the literature reviewed for the concept of brand equity, empirical studies to test the proposed constructs in the Brand Resonance model for processed foods in the context of India are quite limited. Theoretical framework of the present study is based on the consumer based brand equity model called the Brand Resonance model developed by Keller (2001).

Figure 1: Brand Resonance model



(Source: Keller, 2001)

These four constructs consist of six blocks, which were named as brand building blocks. All these six brand building blocks were arranged in a shape of pyramid.

The pyramid explains that the power of brand lies in what consumers learnt, felt, saw and heard about the brand over time. The process of moving from bottom to top of the pyramid helps in creating brand equity. Keller (2001) explained the six building blocks as follows:

- (a) Brand salience, which relates to how often the brand is evoked in the situations of purchasing and consumption.
- (b) Brand performance, the degree to which the product meets the functional needs of consumers.
- (c) Brand imagery, which relates to the extrinsic properties of the goods or services.
- (d) Brand judgments, which concentrate on the personal opinions and evaluations of consumers.
- (e) Brand feelings, which are the emotional responses and reactions of consumers towards the brand.
- (f) Brand resonance, which refers to the nature of the customer-brand relationship and the degree to which consumers believe that they are “in sync” with the brand.
- (g) As per the Brand Resonance model, consumers with true brand resonance, probably have a high degree of loyalty and energetically seek ways to interrelate with the brand and express their experiences with other customers (Atilgan, et al 2005).

## Literature review

There is enough literature on the brand equity worldwide and in the present study a few of them have been reviewed. However in our knowledge we could not find the study done in the context of brand equity and its impact on consumption pattern of processed food. Therefore we have concise our literature review with the brand equity.

Brand equity refers to the marketing effects and outcomes that build up to a good or service with its brand name. Recent studies on brand equity point towards the fact that most of the multinational corporations in the worldwide are focusing on brand equity in their marketing operations. Today’ business world rely mostly on brand equity. In the present time, business is not restricted to boundaries of nations or cultures, but there is a concept of global market, where brands are considered as global brands.

Many contemporary studies in the context of brand equity have provided evidences of global brands, and all organizations (both tangible and intangible) wish to develop themselves as global brands. In the case of goods branding, good itself acts as a primary brand, whereas in case of services, the service provider acts as a primary brand.

In marketing discipline, brand equity has emerged as one of the critical issues to be discussed and understood (Keller, 2009, Keller, 2001, Aaker, 1996). In the literature, brand equity has been discussed by many researchers in many ways. According to Zeithaml, (1981), Brand development is imperative in service sector because of the complicatedness in differentiating products that are deficient in terms of material differences. Branding is a principal success driver for service organizations, and it plays a vital role in service

marketing because strong brands increase confidence of customers in the case of invisible purchase (Berry, 2000). However even for the tangible products like processed food the brand image can play a vital role as found by some of the recent researchers.

## **Objective**

The present study makes an attempt to provide the changing consumption pattern of processed food in developing Indian economy and how the brand value of processed food products matters for the consumers in their purchasing decision. More specifically the present study aims at examining the individual impact of the five determinants of brand equity on consumers' purchasing decisions in case of processed food products. For examining that, the first objective is to validate the different determinants of brand equity in case of processed food, and then secondly to estimate the magnitudes of these determinant for making an impact on the purchasing decision of consumers' have been set. This has been done by taking brand resonance as the independent variable and other five determinants of brand equity as dependent variables.

## **Data and Research Methodology**

The present study is based on the primary data collected through a structured questionnaire adopted from Keller, (2001). Variables under study have been taken from the previous literature and have been measured through perceptions of respondents. Stratified random sampling method has been used to collect the responses from the population respondents. A pilot study was conducted with 93 respondents, and then chronic Alpha was estimated to check the reliability of the questionnaire. The Chronbach Alpha value for six construct and for the overall questionnaire proved the reliability of the used questionnaire in Indian context. After, getting the structured questionnaire for the study, the total of 400 questionnaires was demonstrated to the potential respondents chosen from different parts of NCR (National Capital Region).

## **Data Presentation**

The questionnaire included a section on customer's profile, as various demographic and other factors were likely to influence the customer services offered by the processed food producing brands. Information on demographic characteristics may also be helpful to provide demographic differences in the consumption behaviour of processed food. A demographic profile of the respondents consisted of age, gender, marital status, educational qualifications, employment status, and monthly income. Among the respondents 58.5 percent were of the age group 16 to 35 years, and rest 41.5 percent of respondents were from 35 years or more. Majority of respondents were males with 61 percent and female respondents were about 39 percent.

The percentage of married respondents reached at 69 percent. Moreover the occupational variables showed that the respondents had major portion of professionals (61.6 percent), where as the percentage of self employment, wage employment, others were 6.4 percent, 5.2 percent, 26.8 percent respectively. In the survey it was also found that the respondents came from different income backgrounds; a major part of them (51.3 percent) earned more than Rs.25, 000, and below Rs.25, 000 were only 30.7 percent. However 18 percent of the respondents were financially dependent on others.

## Data analysis and findings

The Microsoft -Excel software package 2007, and the SPSS software package 17.0 version was used for analyzing the data collected for the present study.

**TABLE 1**  
Reliability Coefficient for Brand Equity Constructs

Name of Construct	Cronbach's Alpha Value
Brand Salience	0.773
Brand Performance	0.803
Brand Imagery	0.765
Brand Judgements	0.845
Brand Feelings	0.798
Brand Resonance	0.876
Overall	0.803

## Exploratory factor analysis

Exploratory factor analysis has been performed in the present study for reducing the total number of items to a reasonably small number of underlying factors. Furthermore the factors analysis performed for the present study has also helped the researcher to test that whether data collected in the context of present study are consistent with the prescribed structure taken from the literature. Factor analysis reduced the variables in six factors and these six factors found in the present study are consistent with the determinant of brand equity already found by other researchers in different context.

**TABLE 2**  
Kaiser-Mayer-Olkin Test of Sample Adequacy and Bartlett Test of Sphericity

Kaiser-Mayer-Olkin measure of sample adequacy		0.889
Bartlett test of Sphericity	Approx. Chi-Square	1911.123
	Significance	0.000

The Kaiser-Mayer-Olkin (0.893) and Bartlett's Test of Sphericity (Chi-square 1943.231, significance 0.000) prove that factor analysis done with the brand equity related variables was effective. Six factors were extracted using the methods of principal component analysis.

The extracted six factors explained 69.53% of the total variance. Principal Component Analysis using varimax rotation with Kaiser Normalization was performed to find the dimensionality of the data set collected. The loadings of the factors identified in factor analysis were stable. Each of the variable loaded high on a single factor. Cut-off point was 0.40 for factor structure matrix.

TABLE 3  
Factor loadings matrix

Variables	Factor Loading					
Brand Resonance 1		0.42		0.83		0.53
Brand Resonance 2				0.79		
Brand Resonance 3				0.85		
Brand Resonance 4	0.49			0.83		0.45
Brand Resonance 5				0.76		
Brand Resonance 6				0.79		
Brand Resonance 7				0.73		
Brand Judgement 1		0.72				
Brand Judgement 2		0.66				0.41
Brand Judgement 3		0.66				
Brand Judgement 4		0.79				0.49
Brand Judgement 5		0.84		0.55		
Brand Judgement 6		0.81				
Brand Judgement 7		0.73				
Brand Feeling 1						0.83
Brand Feeling 2						0.81
Brand Feeling 3		0.41				0.75
Brand Feeling 4						0.71
Brand Performance 1			0.51		0.80	
Brand Performance 2					0.72	
Brand Performance 3	0.41				0.87	
Brand Performance 4					0.84	
Brand Performance 5		0.44			0.75	
Brand Performance 6					0.72	0.50
Brand Performance 7					0.71	
Brand Performance 8					0.81	
Brand Imagery 1	0.61		0.45			
Brand Imagery 2	0.66					
Brand Imagery 3	0.72				0.45	
Brand Imagery 4	0.75					
Brand Salienc 1			0.90			
Brand Salienc 2	0.41		0.81			
Brand Salienc 3			0.84		0.47	
Brand Salienc 4			0.81			0.46

Exploratory factor analysis results give six relevant factors in building the brand equity for processed food Indian context. The study used brand equity construct proposed in the Brand Resonance Model by Keller (2001). The six factors, which form the predictors of service brand equity are brand salience, brand performance, brand judgment, brand feelings and brand resonance. Among these variables, strong, significant and positive correlation was found among brand performance and brand judgment, brand feelings and brand resonance. In addition, brand judgment is found positively related to brand feelings and brand resonance. A strong, significant, and positive relationship between brand feelings and brand resonance was also evident from correlation results.

### Multiple regression analysis

Multiple regression model has been estimated in the present study to relate the construct of brand resonance with other brand equity constructs. For the purpose of

developing the regression equations, the five brand equity factors such as brand salience; brand performance; brand imagery; brand judgements; brand feelings were taken as the independent variables and the brand resonance as the dependent variable.

The estimated regression model for the present study

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \mu_i$$

Where;

Y is the factor scores of Brand resonance factor

X<sub>1</sub> is the factor scores Brand Salience factor

X<sub>2</sub> is the factor scores Brand performance factor

X<sub>3</sub> is the factor scores Brand Imagery factor

X<sub>4</sub> is the factor scores brand Judgments factor

X<sub>5</sub> is the factor scores brand feelings factor

And  $\mu$  is the random error term

**Estimated regression equation in the present study provides the following estimates of coefficients**

Brand resonance = -0.283 + 0.498 Brand Performance + 0.473 Brand Imagery + 0.308 Brand Judgements + 0.138 Brand salience + 0.092 Brand feeling.

Overall R square for the estimated regression model was 0.676, with F-value significant at 1% significance level.

TABLE 4  
Multiple Regression Results

Independent Variable	Unstandardized Beta	Standard Error	t-Value	Sig.
Constant	-0.283**	0.053	-5.340	
Brand Performance	0.498**	0.053	9.396	0.000
Brand Imagery	0.473**	0.053	8.925	0.000
Brand Judgements	0.308**	0.053	5.811	0.000
Brand Salience	0.138**	0.053	2.604	0.010
Brand Feelings	0.106*	0.053	2.000	0.048
**Significant at 1 percent level of significance, * Significant at 1 percent level of significance. R square = 0.676, F value significant= 0.000				

The above table it is evident that brand performance (0.498) emerged as most important determinant of brand resonance followed by brand imagery (0.473), brand judgements (0.308) and brand salience (0.138). Brand coefficient for brand feeling emerged as insignificant determinant of brand equity at 1 percent level of significant. However, estimated probability value of the brand feeling factor showed that, it is significance at 5 percent level of significant (Table 4). Possibly this is an indication that in case of processed food products in India consumers are yet to relate themselves sentimentally with the products.

Building the relationship between the service provider and consumers, brand feelings is one of the important factors and it requires a fair understanding of the brand. In

the present study, performance of the brand, brand imagery, and brand judgements emerged as very important determinants of brand resonance from consumers perspective.

## Conclusion

In order to satisfy the customers, processed food producers should think about customized services in delivering the products to the consumers and in addition to those, they can also work out the possibilities of rewards to delight their customers or attract them for patronizing the brand. On the basis of the findings from the present study we can conclude that all the five determinants of brand equity are significantly contributing to the positive brand resonance of the Indian consumers. However the magnitude of different determinants are varying, and in case of brand feeling it is not highly significant. Therefore the producers are advised to work on these issues in order to attract more and more customers towards their brand.

## Research Limitation and direction for the future study

The present study has been carried out by collecting the data only from the NCR (National Capital Region) region. However it will be more interesting to find out the impact of brand equity determinants on consumers' perception about the processed food brands by collecting the data from some other regions also, like from South India. In that case one can also compare the impact of these determinants; that whether the magnitudes of the determinants are same or different in two regions.

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