



# An Application of Structural Equation Modelling for Measuring Brand Attributes of Packed Milk

## KEYWORDS

Brand attributes, Brand feeling, Brand personality, Ruggedness

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**ABSTRACT** Consumer has lot of choices in the branded milks and basically milk requires preservation and perishable in nature. So, based on this product attribute how influence the customers for making purchasing decision of extrinsic attributes related to the brand.

This study aims to measure the factor which influencing the brand attributes of packed milk with reference to the cuddalore town, Build the model to find out the brand attributes of packed milk. Basically this study is nature of descriptive research study. Totally 500 sample were collected for this study. Sample size were determined based on trail survey. Stratified random sample applied for this study.

The major findings of this study are, most of the people were felt that there is lack of distribution intensity, supply for standardised milk is low. Customers are felt that they are highly agree that the level of price fixation for each variety of milk. From the AMOS used to draw the structural relationship among the constructs based on the available literature as well as the statistical tools. User image is the mediating factor for brand attribute.

## 1. INTRODUCTION

Brand attributes are those descriptive features that characterize a product or service. Brand benefits are the personal value and meaning that consumers attach to the product or service attributes. In general, direct experiences create the strongest brand attribute and benefit association and are particularly influential in consumers' decisions when they accurately interpret them. Word of mouth is likely to be particularly important for restaurants, entertainment, banking, and personal services.

### Intrinsic brand attribute:

Intrinsic brand attributes are product-related attributes. They are related to a product's Physical composition and service request. For consumers, intrinsic brand attributes are requisite vary by product or service category (Keller 1993). These attributes are distinguished by branded product's essential ingredients and features, which determine the nature and level of Product performance (Keller, 1998).

### Extrinsic brand attribute:

Extrinsic brand attributes, namely non-product related attributes, are defined as external aspects of the product or service that related to its purchase or consumption (Keller, 1993). They are related to brand's symbolic attributes and may also serve as a measure of product quality. Extrinsic brand attributes satisfy consumers' underlying needs for social approval or self-esteem. They allow consumers to experience positive emotions and to help them communicate to others their values and personal features. The classification of extrinsic brand attributes is based on Li (2004). Four main types of extrinsic brand attributes (price, user imagery, usage imagery, and personality) are introduced as follows.

#### A) Price:

The price of the product or service is considered a non-product-related attribute because it represents a necessary step in the purchase process but typically does not relate directly to the Product performance or service function. Price is a particularly important attribute association because consumers often have strong beliefs about the price and value of a brand and may organize their product category knowledge in terms of the price tiers of different brands (Keller, 1998 Blattberg and Wisnicwski, 1989).

#### B) User imagery and Usage imagery

User and usage imagery can be formed directly from a consumer's own experiences and contact with brand users. It can also be formed indirectly through brand advertising or by some other source of information, such as word of mouth (Keller, 1993, 1998).

#### C) Brand Personality:

Plummer (1985) asserts that one component of brand image is the personality or character of the brand itself. In Aaker's (1997) research, brand personality is defined as the set of human characteristics or traits that consumers attribute to a brand. It includes associations with particular characters, symbols, life-styles, and types of users.

## 2. PROBLEM DEFINITION:

The biggest challenge for companies is to compete in the market place and how to differentiate their products from the competitors. In modern business world, due to development of science and technology, many new branded have been introduced in the market.

Now a day's consumers have lot of choices in the branded milks and basically milk requires preservation and perishable in nature. So, based on this product attribute how influence the Consumers for making purchasing decision of extrinsic attribute related to the brand. Hence the present study aims to find out the factors influencing the brand attributes of Packed milk in cuddalore town.

## 3. OBJECTIVES OF THE STUDY:

- To measure the factors which influencing the brand attributes of packed milk in Cuddalore town
- To find out the relationship among the factors to determine the brand attributes.
- To Offer suggestion theoretical contributions and managerial implications

## 4. RESEARCH DESIGN

### 4.1.1 Type of Research :

Descriptive research

### 4.2 Method Of Data Collection :

Primary Data: Well-structured questionnaires & Secondary Data: books, internet, journal and companies records.

4.3 Sampling Design

4.3.1 Type of Universe: Population for this research study is a finite in nature. Total population is about 113572.

4.3.2 Classification of Population

SERIAL NO	NAME OF THE DEPOT	NUMBER OF depots	NO OF CUSTOMERS	Proportionate sample
1	Aavin	11	68142	300
2	Arockya	9	36157	160
3	Cavins	6	9273	40
			113572	500

4.3.3 Sample Unit

Sample unit for the study is made based on geographical unit in cuddalore town,

4.3.4 Size of Sampling

Sample size decided for this research study is 500. Sample size is decided based on the trial survey.

4.3.5 Sample Procedure

- Proportionate Stratified random sampling

5. ANALYSIS AND DISCUSSION

5.1. Chi-square test for testing the level of significance

S.No	Relationship with variables	$\chi^2$	Sig./ Insig
1	Qualification and awareness about packed milk	63.709	Sig.
2	Qualification and kind of information received about packed milk	25.310	Sig.
3	Qualification and frequently purchase of the packed milk	29.565	Sig.
4	Qualification and reasons for consuming packed milk	77.466	Sig.
5	Occupation and tenure of knowing about packed milk	28.459	Sig.
6	Occupation and channels preference milk	50.221	Sig.
7	Age and opinion about packed milk	29.832	Sig.
8	Age and price	31.460	Sig.
9	Monthly income and affordable price	27.481	Sig.
10	Monthly income and compare with other product	47.805	Sig.

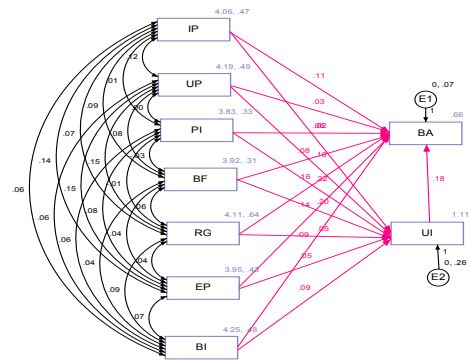
Hypotheses:

- H<sub>0</sub>: There is no significant difference between variables (Abbreviated as Insig.)
- H<sub>1</sub>: There is significant relationship between variables (Abbreviated as Sig.)

5.2 Reliability and descriptive statistics for constructs

Label	Variables	Mean	Variance	Reliability ( $\alpha$ )
IP	Intrinsic Personality	3.91	16%	.638
UI	User Image	4.1	9%	.606
UP	Usage of Product	3.94	8%	.667
PI	Price Image	3.83	7%	.625
BF	Brand Feeling	3.90	6%	.667
RG	Ruggedness	3.79	6%	.642
EP	Extrinsic Personality	3.72	5%	.645
BI	Brand Influence	3.99	5%	.677

5.3 AMOS for brand attributes of packed milk



REGRESSION WEIGHT	MEAN	S.E.	S.D.	C.S.	SKEWNES	KURTOSIS
UI<--IP	0.023	0.001	0.048	1	0.002	0.061
UI<--UP	0.155	0.001	0.048	1	-0.03	0.018
UI<--PI	0.216	0.001	0.055	1	-0.014	-0.016
UI<--BF	0.198	0.001	0.057	1	0.007	0.051
BA<--BI	0.092	0	0.024	1	-0.023	0.037
BA<--EP	0.14	0	0.026	1	0.01	0.014
BA<--RG	0.162	0	0.021	1	0.014	0.078
BA<--IP	0.111	0	0.024	1	0.005	0.039
BA<--UI	0.176	0	0.03	1	0.02	0.04

COVARIANCES	MEAN	S.E.	S.D.	C.S.	SKEWNESS	KURTOSIS
IP<->EP	0.148	0	0.03	1	0.216	0.163
UP<->EP	0.161	0	0.03	1	0.245	0.248
PI<->EP	0.08	0	0.024	1	0.156	0.142
BF<->EP	0.038	0	0.023	1	0.07	0.05
RG<->EP	0.047	0	0.033	1	0.047	0.159
IP<->RG	0.074	0	0.035	1	0.094	0.151
UP<->RG	0.162	0	0.037	1	0.146	0.105
IP<->UP	0.132	0	0.031	1	0.2	0.216

The above regression model by AMOS graphics exhibit relationship among the Brand attributes dimensions. It shows that UI (User image) mediate the BA (Brand attributes), UI influenced 0.51 to BA, followed by PI (Price image) influenced 0.216 to UI. Some of the other dimensions are also having significant impact on Brand attributes, which are RG (RUGGEDNESS)0.162, EP (Extrinsic personality) 0.14, IP (Intrinsic personality) 0.111, BI (Brand influence) 0.092, PI (Price image) 0.058, UP (Usage of product) 0.028. The BF (Brand feeling) is significant by having very low regression value 0.047.

The PI (Price Image) is most influential factor to the mediating factor UI (User image) 0.216, followed by BF, UP, BI, EP, RG, IP (Brand feeling, Usage of product, Brand image, extrinsic personality, Ruggedness and intrinsic personality) are having positive regression and significant.

To check the convergence of the Bayesian MCMC method the posterior diagnostic plots are analyzed. The following figures show the posterior frequency polygon of the distribution of the parameters across the 80,000 samples. The Bayesian MCMC diagnostic plots reveals that for all the figures the normality is achieved, so the structural equation model fit is accurately estimated.

6. Managerial Implications

- The companies has to improve their distribution channel because the products are not available at the right time to booth.
- It is found that there is no awareness of some of the types of Packed milk like toned milk, double toned milk and UHT milk to the consumers. So the organization can take necessary steps to create awareness.
- It has been observed that most of the consumers of Packed milk feels that they don't have Packed booth in their nearer area. So the companies can take necessary steps to set up many more Packed depots in all major

areas of the Cuddalore Town to meet out the demand of the customers.

- There are a large number of demands for the standardized milk. So the organization can increase the supply.
- Companies must increase number of varieties of dairy products.

### 5.3 CONCLUSION

This study measures the attributes of Packed milk among the

customer purchase decision. From customer prospective researchers infer that there is a lack of distribution intensity in Cuddalore town and the supply for standardized milk is low. Some of the respondents are not satisfied with respect to quality offered by Packed milk. But most of the respondents agree that level of price fixation for each variety of milk. The occupation of the respondents significantly increases the awareness about the brand.

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