Loyalty Analysis of Select Indian Companies: with Special Reference to Corrugated Cement Roofing Industry in India

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Abstract: A Loyalty study based on AHP model has been initiated to decipher Loyalties of Commodity consumers in the Indian Corrugated Cement Roofing Industry.

These loyalties are in form of Loyalty scores of each brand of this industry. The score of the construct indicating the value proposition of the consumer are calculated using SEM. This analysis will help the firm in controlling diverse elements and adjust strategies for increasing the loyalty and enhance the market share of the firm. The the concerned firm should continuously review these constructs and the resulting loyalties in order to manage its marketing policies consistent with changing market dynamics.

Keywords: Consumer behaviour, Structure Equation Modelling technique, Analytical Hierarchy Process, Loyalty score, constructs and indicators, Market share, strategy, Corrugated cement roofing industry, commodity marketing.

INTRODUCTION

Every Organization today seeks to have the customers who are loyal to their brands. It is founded that acquiring a new customer is anywhere from five to 25 times more expensive than retaining an existing one. A research done by Frederick Reichheld of Bain & Company (the inventor of the net promoter score) that shows increasing customer retention rates by 5% increases profits by 25% to 95%.

The Customer Loyalty study has been initiated in the corrugated cement sheet roofing industry to discern the consumer behaviour. The firms invest a lot in the branding to overcome competition which is a common trend in FMCG or consumer industry but not so profound in the B2B sectors.

The researchers have accordingly tried to determine the loyalty scores of each of the players in the cement sheeting roofing industry. This will enrich the firms on the relative importance of various known factors responsible for purchase decisions & therefore allow the marketers to frame optimum strategies.

The Corrugated Cement Roofing Industry

The referred industry is mainly serving rural India to a great extent and the urban markets to a considerably lesser extent. The market demand of Cement Sheet Roofing in India is mainly driven by the growth in overall GDP and Agricultural GDP in particular.

There are virtually no entry barriers in this industry as the capital costs of setting up the plant are nominal. Presently there are around 18 companies in India with 50 plus plants across the country with an installed capacity of above six million tons per annum and having gross estimated annual revenue of about US$ 1billion. In the current scenario, there is a competitive pressure on prices on account of fragmentation present in the industry. This study will guide the marketers as they become more informed about brand preference pattern followed by customers and the variables affecting brand loyalty of buyers in Corrugated Cement Sheet Roofing markets. The loyalty Index analysis if adopted by the firm will help in managing various product and brand elements and modify strategies to increase their customer loyalty and thus the market share and EBITDA of the companies.

The adequate shelter for the rural poor has been initiated by the govt. in form of its policy and programs like Indira Awas Yojna, Golden Jubilee Rural Housing Finance Scheme, and Pradhan Mantri Adarsh Gram Yojna etc. The prosperity of rural at the bottom of the pyramid and available liquidity has currently given strength to the roofing market. There are estimated 30.49 million houses in India. Of these, 61% have pukka roofs and rests are made of thatch (kuccha roofing) and clay tiles. In rural area security concern coupled with increased income level stimulate the desire to shift from kuccha house to pukka house is increasing.

The Cement Sheet Roofing Industry is showing favourable growth mainly on account of sustained rural demand on the back of adequate disposable incomes and government-sponsored schemes.

Corrugated cement sheeting is a Commodity product. The Indian Cement Sheet Roofing Industry is an example of commodity product which is offering of mass consumption used by the rural poor through a B2C model or industrial consumer through both B2B and B2C model. It is extremely difficult for a consumer to differentiate between the produce of different brand on the basis of similar features offerings of one and all. High competitiveness and marginal ever decreasing pricing trends have threatened the market share and the EBITDA of the various players of the industry. Hence the marketers trend to induce consumer loyalty and generate a satisfied loyal consumer.

Today's construction industry in India of which roofing industry is a small part has shown a significant development of branding phenomena. The major challenge faced by corporate here is to integrate the commodity market with their brand to have an identity for themselves.

Commodity branding is not a new concept but is giving a breath of life in this market. Brand competitiveness increase by boosts market share, enable organisations to charge a higher price, create customer loyalty or even override occasional failures in the eye of consumers

Pure commodities researched in the areas in marketing of electric power (Wiedmann; 2004, 2005, Hartmann & Ibáñez, 2007; Hartmann et al., 2005), the industry relevant to forests (Tokarczyk & Hansen, 2006) and agricultural products markets (Brester & Schroeder, 1995; Ward, et al., 1985). Those research finding and other specimens programs of commodity promotion reflect their effectiveness (Alston et al., 2007). Commodities which are viewed with small difference. Therefore, consumers will select on a price basis which compels their manufacturers to compete on low price and high volume (Kotler & Pfoertsch, 2007; McQuiston, 2004; Michell, King, & Reast, 2001). Proceeding on a price strategy without emphasizing distinguishing features of a product, suppliers are compelled to sell a line of commodity products that must challenge on their basic features (Pesce, 2002). However in case of branded articles, the sellers reiterate on distinguishing feature irrespective of whether it is the case or not (Aaker, 1996; Keller, 1998), viz. name of the brand , key product/service, sentiments, events and user imagery (Keller, 1998).

Name of the brands for consumer industrial products tend to be confusing and not effective Saunders and Watt (1979). Housewives were the survey respondent instead of industrial purchasers, somewhat calling their results into question. The paper board industry was examined by   Sinclair and Seward (1988) who worked on the general pretext that branding is less effective for industrial products vis-a-vis consumer products. Their investigation revealed that significant reasons for branding industrial products was to differentiate and effectively relate the product, stress the product as a speciality product, and to establish a list of loyal customers. Many manufacturers failed to place enough emphasize on adequately

educating the intermediaries and end customers about the singleness of the brand, and as a result their intermediaries did not realize branding as important in comparison to the manufacturers Sinclair and Seward (1998).

When does customer branding occur? The three critical criteria for customer branding to occur are specified by Pennington, J.R. and Ball, A.D. (2009) are

• Should have product variation in market,

• Unacceptability on the delivery of general product

• The buyer must be able to reliably obtain a satisfactory subset somewhere in the marketing channel that meets his or her needs.

The alternative forms of market mixes and their consistency visualized by a commodity market enable customer branding. Normally, a commodity product is deemed to be incessantly homogenous and standardized conforming to defined grade or specifications being delivered consistently. Quality and characteristics disparity in the markets is not a buyers concern in the commodity market. However desirous quality and attributes can be sought.

Differential in a brand product from its unbranded commodity peer is the visualization in the buyer's mind and sentiments attached to the product's features and its performance. Finally, a brand is governed by the minds of the consumer. Normally, branding activities, communication about the brand flows from the marketer to the consumer. In customer branding, it is paradox. The customer is knowledgeable about its needs and wants. He tags it and requests it by a label, or by other kinds of feature which is recognizable.

Literature review enumerates that brand competitiveness is a feature of perceived quality (Aaker, 2000; Berry 2000), perceived uniqueness/differentiation (Berry.2000; Young and Rubicam 2001), imagery (Biel 1997) and deep consumer relationship (Berry.2000).

Brand Loyalty manifests repeated buying behaviour of a consumer over a specific time interval. It builds on the past behaviour and the brand loyal consumer is likely to purchase the products of a specific brand currently and in the future(Lin, Wu and Wang 2000). Consumer loyalty has been studied by simultaneous inclusion of the behaviour and attitudinal studies. Behaviour and purchase loyalty consist of repeated purchase of brand whereas attitudinal brand loyalty includes a degree of inclination in terms of some unique value proposition linked to the brand. Brand loyalty constitutes of inclined commitment. The loyalty of a customer is a greatly grasped commitment to repurchase an inclined product. This is in context of possibility to switch on account of marketing effort. Behaviour and attitudinal are dimensional estimates for computing brand loyalty in a preference behaviour model.

Definition of Variables of Brand Loyalty

Brand Loyalty is perceived as a multi-dimensional construct each affected by multivariate measurement items. In the literature of brand loyalty nine variables have been established. These measures are Involvement, Functional Value, Price Worthiness, Social Value, Brand Trust, Customer Satisfaction, Commitment and Repeat Purchase Behaviour. Current study posits with relevance to Indian Corrugated Cement Roofing industry that has recognised that the nine variables and their measurement items or the indicators are most critical for analysis. A method for computing the Brand Loyalty scores could be sourced from the data obtained from the feedback of the respondents taken through a questionnaire.

Research gaps with respect to the evaluation of loyalty scores and subsequent branding of Corrugated Cement Sheet Roofing Industry have been addressed through the attempted study.

The Objectives identified were to the study importance of each variable influencing brand loyalty with respect to each other. And further to make a pairwise comparison of each brand against these variables.

To analyse loyalty score and interpret how it can help the firms in controlling diverse elements and alter strategies that can increase the loyalty scores and hence the market share of the firm.

Research methodology integrated is using Structural Equation Modelling for data collected as an input to the AHP for finding loyalties. The plausible steps followed are

- Using the established model for the loyalty assessment.

- Evaluation of values of V j deploying Structural Equation Modelling to assess the importance of constructs against each other.

- The instrument design and validity.

- Formulation of Hypothesis

- Evaluation of B ij values using pair-wise comparison matrix.

- Finding the loyalty score index Li.

A survey was initiated comprising of two stages. Initially, the first Questionnaire was circulated on the basis of convenience sampling to the dealers and, customers to assess the score of the construct indicating the value proposition of consumer. The sample size was taken of 120 respondents in Punjab, Haryana, NCR and UP-West. The content validity test of the questionnaire was carried out to test the validity of the questionnaire.

The methodology adopted is Structural Equation Modelling using AMOS software for data collection as an input to the AHP for finding loyalties. Accordingly the Vj values i.e. value proposition of each construct was determined using SEM. Similarly, the second set of a questionnaire was administered on the multi-brand dealers and contractors in a sample size of 10 parties in order to generate pairwise comparison matrix & the priority vectors with respect to the six brands (B ij values) were estimated using AHP.

CONSTRUCT MEASUREMENT OF BRAND LOYALTY AND HYPOTHESIS CONCEPTUALISATION

Involvement

Product involvement is a precondition for brand loyalty. Studies posit a positive correlation between attitude and involvement. Involvement is correlated to consumers thought process, feelings and behaviour response to the Category.

H1 Enhanced level of Involvement gives an **Enhanced** Brand loyalty

Functional Value

The Functional Value is exemplified as service benefit derived on account of quality of the product and anticipated benefits derived from the product by the consumer influencing his choice. So our Hypotheses is

H2 Enhanced Level of Functional Value gives an **Enhanced** Brand Loyalty.

Emotional Value

Motor response generated because of good feelings is defined as emotion. So our Hypotheses is

H3 Enhanced level of Emotion Value gives an Enhanced Brand loyalty.

Price Worthiness

The price worthiness signals benefits discerned by the consumer on account of reduced costs i.e. value for money or in absolute terms. So our Hypotheses is

H4 Enhanced level of Price Worthiness value gives an **Enhanced** Brand loyalty.

Social Value

The benefits obtained from products capability to increase the self-respect of a consumer. So our Hypotheses is

H5 Enhanced level of Social Value gives an **Enhanced** Brand loyalty.

Brand Trust

This is a variable for a long-term lasting positive association. So our Hypotheses is **H6 Enhanced** level of Brand Trust Value gives an **Enhanced** Brand loyalty.

Consumer Satisfaction

This value leads to repeated purchase on account of consumer's contentment. So our Hypotheses is

H7 Enhanced level of Consumer satisfaction value gives an **Enhanced** Brand loyalty.

Commitment

The commitment of consumer has a major psychological effect on the companies. So our Hypotheses is

H8 Enhanced level of Commitment Value **Enhanced** will be the level of Brand loyalty.

Repeat Purchase Behaviour

It is defined in computable terms the extent to which consumer repurchase same brand on an equal periodic interval. So our Hypotheses is

H9 Enhanced level of Repeat Purchase Value **Enhanced** will be the level of Brand loyalty.

Model for finding Loyalty Score indices using AHP

Thomas L. Satty developed the analytic hierarchy process (AHP) as a structured technique for organising and analysing complex decisions.The AHP helps stakeholder to find one that best suits their goal and their understanding of the problem. It provides a comprehensive and rational framework for structuring a decision problem, for representing and quantifying its elements, for relating those elements to overall goals, and for evaluating alternative solutions in a hierarchal form.

The variable or the constructs which are factored in for loyalty are weighted against each other to assess their value proposition in relation to each other to the consumer. This will be obtained by confirmatory factor analysis in structural equation modelling. The AHP hierarchy follows following sequence.

Level 1 The Loyalty score is computed among alternatives with respect to each variable.

Level 2 The variables among by are weighed against each other as per customers choice and value proposition of the variable.

Level 3 The Firm brand is compared to each variable to know the impact of the value proposition.

The researcher study compares each Firm against the other in the industry against each variable as reflected in 90 comparison matrices i.e. 9 indicators against 10 respondents and 6 companies. Thenceforth, the loyalty score indices are obtained by integrating the two sets of parameter mentioned above as per below said formula:

Mathematically, it is represented as $L = V_j B_{ij}$

i= firm brand index's 1,2,3,4,5,6 (Six Firms of the industry)

j= indexes of variables 1,2,3,4,5,6,7,8,9. (9 variables for evaluating the loyalty) v1,v2,v3,v4,v5,v6,v7,v8,v9 relative importance of variables obtained from SEM

B_{ij} is the representing ith brand against jth variable obtained from a pairwise comparison.

L1, L2, L3, L4, L5, L6 are the loyalty indices scores desired from the study.

Computing Vj Values using SEM

Structure Equation Modelling technique used to establish a relationship between variables. It is a confirmatory technique which test models which are conceptually derived and test if the theory fits the data. SEM accounts for measurement errors during data analysis.

In the current study, 29 measurement items or indicators have been identified after doing the content validity test involving concerned persons from the industry. Higher and lower order models are incorporated in SEM. The data obtained from questionnaire 1 is fed as input data of measurement items in AMOS software which has an inbuilt evaluation of testing of the significance and goodness of fit of the data.

Results

(Sums of all columns for the companies should be ideally equal to 100% or 1but due to round off of the digit they are nearly 100%.Infact for example the value for Involvement construct for Charminar of 24.3% signifies in value terms 0.243.)

Table 1: Summary of Results for Calculation of Bij Values using AHP

Companies	Involvement	Functional	Price Worthiness	Emotion	Social	Brand Trust	Satisfaction	Commitment	Repeat Purchase
Charminar	24.3	21.7	19.3	25.5	25.8	23.5	23.3	24.7	23.6
Everest	18.3	20.0	18.3	17.0	17.5	18.5	18.1	17.9	16.9
Ankur	15.2	15.3	16.0	15.0	15.0	16.3	15.4	15.3	16.1
Jaikirti	14.2	14.8	16.6	16.6	14.1	13.7	15.6	13.9	14.0
Upal	13.4	13.2	14.7	13.0	13.0	13.2	12.8	13.6	14.6

Table 2 Summary of Results for Calculation of Vj Values Using AMOS Moderate Fit Model

	Involvement	Functional	Price Worthiness	Emotion	Social	Brand Trust	Satisf action	Commitment	Repeat Purchase
Vj values	1	3.70	1.33	3.69	4.37	4.77	5.45	5.74	2.49

Table 3 Summary of Results of Loyalty Score of 6 Company Brands

S. No.	Firms	Loyalty Scores Indices (Max 100 %)
1	Charminar	23.87
2	Everest	18.06
3	Vishaka	14.84
4	Ankur	15.48
5	Jaikirti	14.45
6	Upal	11.54

Findings Model is Moderately Fit using AMOS

Table 4: The Model for Confirmatory Factor Analysis Using SEM has Following Results

Parameter	Actual	Permissible as per literature
CMIN/DF	1.896	<3
NFI	0.718	0.9(approx.)
TLI	0.823	<0.9(approx.)
CFI	0.84	<0.9(approx.)
RMSEA	0.087	<0.08(approx.)

Outcome and Analysis

This study posits that Charminar brand is acknowledged leader in North India with loyalty score indices of 23.87% followed by Everest at 18.06% and Ankur with 15.48% and Vishaka at 14.84 % and Jaikirti at 14.45% and lastly by Upal at 11.54%.

This study also concludes that Charminar is a leader by virtue of its highest indices scores in all the 9 variables. Similarly, Everest is second by scoring second highest in all the 9 variables. However, Everest has to take note it is being closely followed by Ankur in all the parameters and in case of construct on repeat purchase it faces a risk from Ankur that they may overtake them for this construct in near future. Everest brand can enhance their loyalty indices score by concentrating on the factors like functional value, emotional value, social value, brand trust, Satisfaction and commitment.

Functional value can be elevated by concentrating on the quality and durability features of the product and educate the customer giving more technical information on the various features.

Emotional value can be augmented by improving the bondage between the company and the channel by organising Dealer Development Programs. Brand trust signifies that Everest has to keep its promises to the channel. Company actions should reflect honesty in all dealings. Commitment and Repeat purchase can be increased by improving the service levels with quality material.

Ankur is lower to Vishaka in case of emotion value which is 15.0 and 15.2 respectively that means that bondage between the companies in case of Ankur has to be increased with the channel.

Although price worthiness is not having a greater impact on the loyalty scores still Jaikirti is scoring 16.6 higher than Vishaka or Ankur both these companies are cautioned to look into this factor as well. Jaikirti is scoring low on the repeated purchase front vis-à-vis all the companies including the laggard Upal and need to improve on this variable.

Recommendations

Identified 9 variables in the study play a significant role in calculating the loyalty score and help in developing proactive strategies for enhancing these scores.

Involvement

Indian corrugated cement roofing Industry should highlight superior features and advantages of these sheets vis-à-vis substitutes such as Metal sheets i.e. Pre-Painted Galvanised Iron or Gal volume Sheets (e.g. AC sheets are suitable for insulation against heat, makes no sound during rain etc.) in various DDM's and technical forums. The reliability and long life can be demonstrated by giving a list of existing structures and their photographs which use this product for many decades. Photographs supporting the good condition of AC sheets vis-à-vis metal sheets which are prone to corrosion can be shown. This will educate the customer to carefully choose the product.

Functional Value

The industry can concentrate on process improvements and raw material mixes to produce\ consistent and good quality material without longitudinal and side cracks. Consistent stringent in-house quality audit monitoring at the plants and depots can be carried out. Timely inspections by the quality audit teams can satisfy the external customer grievances.

Price worthiness

The price worthiness variable can be enhanced by improving quality perception, the value of money vis-à-vis the substitutes signifying overall economical feature of the AC sheet resulting in lowering of the total project cost. This image has to be built up by holding conferences, workshop and seminar and programs for the customers, influencers and the architects.

Emotional Value

Durability, safety and quality are all resulting in the generation of confidence to the customer and building an emotional bondage with the company. These features are to be effectively communicated through various channels to the customer.

Social Value

Bondage between the company and the customer helps in building social construct. The customer should feel elated in being associated with the company. The company should proactively work in this direction.

Brand Trust

Honest delivery of promises keeps dealer motivated. Brand trust can be built by keeping channel motivated by virtue of announcing of various schemes and incentives. Consumer schemes should also be affected. However foremost is keeping the promises made and is known for honesty and sincerity.

Satisfaction

The customer's service department of the companies has a pivotal role to play in meeting and justification of expectations of the customer. They get the feedback from the customer and help management to change the strategies on time.

Commitment

The committed customer is important to the company than a new one. Training programs of the channel member help in developing a commitment to the customer. They are responsible for a generation of brand value and creation of brand equity. Quality and timely service are the major paradigms for generation of brand preference.

Repeat Purchase

The company should implement strategies that generate the loyal customers who recommend their brand to friends and

relatives'. Strategies could be loyalty programs, technical seminars, gifts and samples, accumulation of points on consistent purchase for getting gift items.

Conclusion

The marketers of the referred industry tend to induce consumer loyalty and thereby generate a satisfied loyal consumer. The already established model in the available literature for cement commodity used for multidimensional construct has been applied for finding brand loyalty score of corrugated cement roofing Industry.

AHP and Structural equation modelling using AMOS software has been applied to find the loyalty score indices. These scores have been used for suggesting various appropriate strategies in the recommendation section.

Limitation of Study

PAN India random sampling could give a better insight of consumer behaviour pattern of the Corrugated Cement Roofing market.

The referred industry is factory centric i.e. the hub of the influence of the particular brand on the consumer is greatly affected by the nearness to the sources of supply. This study was primarily focused on the consumers in NCR and Punjab and Haryana. However, loyalty industry score will vary from region to region depending on the local regional influence of the local source of supply. Further, the study is relevant to the period of study as respondent opinion is a dynamic affair influenced by ever-changing environment. Significantly the AMOS Model has taken 120 respondent behaviours resulting in a moderate fit. Larger sample size could have definitely given a close fit to the model and improved the results further.

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