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An Assessment of the Relationship Among Brand Trust, Perceived Value and Brand Loyalty

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Abstract

Purpose: This study was conducted to determine the relationship between brand trust, perceived value and brand loyalty with respect to Toothpaste. Brand Loyalty was chosen as the dependent variable and the impact of above mentioned independent variables were checked on it.

Method: Non Probability Purposive technique was used to collect the sample using three modified tools. In all, 280 questionnaires were distributed and out of them 265 were received eventually. Finally 250 questionnaires were selected for further analysis. The population of the study were all the customers of FMCG sector in Gwalior region buying specifically toothpastes. Age, marital status, education and gender were the demographic variable used for the study.

Findings: Cronbach Alpha Reliability of brand trust scales was reported to be 0.840, For Perceived value it was reported as 0.698, for Brand loyalty it was 0.845. After Exploratory factor analysis, extracted factors were taken to AMOS for Confirmatory Factor Analysis (CFA). Through SEM, Study confirms a relationship of brand loyalty with all of the independent variables, which implies that the null hypothesis was rejected. Independent variables are positively and significantly linked with the dependent variable, which shows the Brand Loyalty can be achieved by improving Brand Trust and Perceived Value. The purpose of this study was to develop and implement a method to increase brand loyalty of the customers for toothpaste brand. The study also explored the relationship between brand trust, perceived value and brand loyalty in FMCG industry. Incremental Fit Measure and Parsimony Fit Measure were as per the required limit. The Construct Validity and Discriminant Validity were found to be as per threshold limit.

Practical Implications: Current study is very useful for the managers who engage themselves in understanding perceived value, brand trust and brand loyalty. These variables can be used to understand the customers' needs and making them satisfied. The study can be used by different researcher to evaluate the different factors in different prospective. It will also help the manager in knowing the parameters through which they can more satisfy to their customer. The conceptual Information from this study can also be utilized in terms of developing brand loyalty. This study can also be used as a foundation for researchers to conduct further studies in different context.

Keywords: Brand Trust, Perceived Value and Brand Loyalty

Introduction

In the light of current globalization, rapid and wide usage of the Internet along with the cut-throat competition between products and giant economic alliances, brand is being considered more important in many aspects. It becomes intrusive in markets to confirm the company or product's name, to sustain its professional reputation, and to maintain its existence in markets that is characterized by severe competition.

Brand loyalty is one of the most important issues in the world of marketing and business. It is a very important domain from the marketing strategy perspective, especially as the current markets are marked by its passing through a highly mature phase and intensive competition. Keeping the customer loyalty to the brand is very crucial for the survival and stability of the organization.

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Jacoby and Chestnut (1998), Pessemier (1959), Reicheld (1996) stated, that Brand-loyal consumers are willing to pay more for a brand because they perceived some unique value in the brand that no alternative brand can provide. Brand loyalty's influential strength does not restrict to be a marketing instrument only, but it goes beyond this stage to reach the goals and future visions of the product for the company's success and its survival in the market.

Conceptual Framework

Brand is the "name, term, design, symbol, or any other feature that identifies one sellers' product distinct from those of other sellers for instance Coca-Cola.

Brand Loyalty

The definition is expressed by a set of six necessary and collectively sufficient conditions. These are that brand loyalty is (1) the biased i.e. Non random, (2) behavioral response i.e. Purchase, (3) expressed over time, (4) by some decision-making unit, (5) with respect to one or more alternative brand out of a set of such brands, and (6) is a function of psychological (decision making, evaluative) processes (Jacoby and Chestnut, 1978). Brand loyalty can be defined as behaviour of the customers toward selected brand which depend on non-random and business of the customer. It is a behavioural response of the customer which depends on what exactly customer want to buy. The customer will not purchase that brand which, they do not want to buy. Brand loyalty is a function of psychological process, which means that brand loyalty is a function of both behaviour and attitudes (e.g. repeat purchases). The consumer should also have the intention to buy the same product or services all the time.

Operational definition of Brand Loyalty is "customer responses which consist of behavioural responses or function of psychological process by which customer become biased toward the selected brand, product and services which motivate the customer to receive a utility of selected brand, product and services". Brand loyalty is affected by brand trust and perceived value.

Brand Trust

Mc Allister, (1995) defined brand trust as the degree to which an individual is confident and eager to act on the basis of the word, actions and results of others. Operational definition of brand trust is that it is an intrinsically emotional and rational commitment of customers with a specific brand. It is observed now days that marketer have understood clearly that if they increase emotional and rational commitment of customer toward brands then surely it will increase brand trust. Hence, marketers are now a day's very much keen in enhancing brand trust because it is observed that higher trust increases brand loyalty.

Perceived Value

Customer perceived value is the value that customers perceive to receive or experience by using a service, and it steers purchase behaviour (Bettman et al. 1998). The customer's overall assessment of the utility of a product based on perceptions of what is received and what is given (Zeithaml, 1998). Perceived value is defined as six individual dimensions (Conditional, Epistemic, emotional, social, convenience and monetary value) which are grouped into content and context related perceived value cited from Philstrom (2008). Operational definition of customer perceived value is the overall evaluation of the utility of a product, brand and service based on his/ her experience which is perceived consistently to acknowledge value by using product, brand and services.

The "Dentifrice" Industry

'Dentifrice' the synonym for toothpaste is one of the most needed and inevitable product in the list of customer. Although FMCG industry is fortunate enough to have number of brands available yet the benefits offered is a severe topics for debate and discussion. On the one side allopath practioners are more function oriented and herbal brands focusing on chemical free products wherein fluoride seems to be common. Irrespective of brands the common problems like dental caries and gingivitis are expected to be solved with toothpaste along with a pleasant taste. The current report of World Blaze mentioned the top ten brands existing in India. Colgate by Colgate Pamolive still remains on number one position followed by Closeup, Pepsodent, Oral-B, Sensodyne, Babool, Aquafresh, Dabur Red, Meswak, Dantkanti. As per the report of Economic Times for the year 2016, Colagte holds 55.7% of market share, however Dantkanti by Patanjali is able to challenge the leader in all aspect. With 2.2% of market share in 2016 it is able to grab 6.6 % in year 2017 encashing its 'been Ayurvedic' USP. Looking at the present scenario the all existing brand players needs to be more focused on the product performance aligned with the prices as it will lead to its purchase as well as repurchase intentions (Rajput et al, 2016).

Literature Review

Perceived Value

Bettman et al. (1998) found that customer perceived value is the value of brand, product and service that customers perceive to receive or experience by using a service, and it boosts purchase behaviour. Zeithaml (1988) narrated that the perceived value is the overall evaluation of utility what customer derive after using it. Flint et al. (2002) and Gronroos (2000) found perceived value is a trade off between benefits and sacrifices. Monroe (1990) and Ravald and Gronroos (1996) explained that perceived value was seen as a trade off between quality and sacrifices. Oh (2003), Peterson (1995), Ravald & Gronroos (1996) explored that perceived value is the result of marketing activities and is the first element in relationship marketing.

Petrick (2002) projected five dimensions of perceived value i.e., Quality, Emotional Response, Monetary prize, behavioural price and Reputation. Havlena & Holbrook (1986) concluded that perceived value as a cognitive variable is partial, since it is necessary to incorporate the affected component and maintain a comparison between getting and giving. Holbrook & Batra (1987) experienced, that perceived value is a dynamic variable after consuming. Assael (1995), Ravald & Gronroos (1996) found, that perceived value is a subjective construct between cultures at different times. Sweeney and Soutar (2001) developed, PERVAL scale of measurement, though referring to the post-purchase perceived value of a good. Petrick (2002) also developed perceived value measuring scale for restaurants. Dougall and Levesque (2000) examined, that Customer perceived value is critical for long-term benefits.

Brand Trust

Brand trust is one powerful factor that affects customer loyalty therefore trust becomes the most important bridging factor in the relationship between a company and its customers and the relationship between Brands with customers. Delgado et al. (2003) found that brand trust includes brand reliability and brand intention. Singh and Sirdeshmukh (2000) explored that trust is an antecedent of satisfaction, which in turn will influence loyalty and satisfactions is also influenced by customer experience (Rajput et al., 2012) and in addition service quality can be considered as one of the antecedents of loyalty (Rajput and Saxena, 2015). Arjun & Morris (2001) concluded that brand loyalty is developed after a long lasting relationship, but a long lasting relationship is maintained through brand trust. Oliver (1999) supported the view that a long-lasting relation is the most important determinant of brand trust. Delgado et al. (2003) narrated that brand trust refers to a consumer to contain explicit expectation of brand's credibility and intention.

Chauduri and Holbrook (2001) narrated that Brand Trust is the willingness of the average consumer on the ability of the brand to perform its function as stated. Lau and Lee (1999) analyzed and found that brand trust is the willingness of customers in the face of the risks associated with the brand purchased, that provide a positive and profitable results. Upamannyu and Mathur (2013), concluded that brand trust and brand affect have a significant relationship with a brand loyalty, but brand image was not found to be related with brand loyalty. Upamannyu et al. (2013) stated that brand trust and customer satisfaction is significant in influencing customer brand loyalty positively.

Brand Loyalty

Oliver (1999) defined brand loyalty as the deep commitment of consumers towards a brand. He further divided, brand loyalty into two components, behavioural loyalty and attitudinal loyalty. Mellens et al., (1996) analyzed, that brand loyalty has been largely defined and measured in either behavioural or attitudinal terms. Ehrenberg (1988) and East (1997) found that brand loyalty in the consumable market focused typically on behavioural measures of loyalty. Bloemer and Kasper (1995) concluded that brand loyalty should have six necessary conditions which are: 1) the biased 2) behavioural response 3) expressed over time 4) by some decision-making unit 5) with respect to one or more alternative brands out of a set of such brands and 6) a function of psychological processes. Reicheld and Sasser (1990) found that brand loyalty exists when customers have a high relative attitude toward the brand exhibited through repurchase behaviour. Oliver (1977) narrated that brand loyalty was strongly promised to superior service or goods re-purchase in acquiring the same brand despite of marketing efforts by potential rivals and their impacts. Zare (2008) discovered in their study that brand loyal customer not only focuses on prices but also acts like a fan of organization and, as a result, helps to attract new customers. Upamannyu and Bhakar (2014) found that there was a very strong and positive relationship between customer satisfaction and loyalty intention in the presence of the brand image.

Objective of the Study

- To redesign and re-standardize measures for evaluating brand trust, perceived value and brand loyalty with special reference to Toothpastes.
- To identify the underlying factors of brand trust, perceived value and brand loyalty.
- To confirm emerged factors using CFA.
- To establish cause and effect relationship between independent variable i.e. brand trust and perceived value and dependent variable i.e. brand loyalty through SEM.

Research Methodology

The Study

The study was causal in nature and the survey method was used for data collection. The population of the study were all the customers of FMCG sector in Gwalior region using various brands of Toothpastes.

Description of Sample

Three constructs were used (Brand Trust, Perceived Value and Brand Loyalty) in the current study. In all, 280 questionnaires were distributed and out of them 265 were received eventually, in those 15 were not filled properly. Therefore, 250 questionnaires were used finally for further analysis.

Total of 250 customers with varying demographic groups were taken as respondent from Gwalior city in Madhya Pradesh. These variables consist of age, marital status, education and gender. Age as a categorical variable in the current study was categorized into four categories and these were under 20 years old, between 21 to 29 years old, between 31 to 39 years old and under 60 years. 48 (19.2%) peoples were taken as respondents under 20 years in the current study, 142 (56.8%) peoples were taken as respondent between 21 to 29 years. 54 (21.6%) peoples were taken as respondent between 31 to 39 years. 6 (2.4%) peoples were taken as respondent between above 50 years. Marital status of respondents in the current study was categorized into two categories which were married and un-married. 104 ((41.6%) respondents were married and 145 (58%) were unmarried and one respondent did not define his/her category.

Education was taken as the next categorical variable in the current study, which was categorized into four categories. First intermediate category included 13 (5.2%) respondents. Second 11 (4.4%) respondents were taken as diploma holder. Third category was of Graduates including 120 (48%) respondents and 106 (42.4%) respondents were found to be post graduates the last category in the current study. Gender was also taken as a categorical variable in the study, which was categorized into two categories. 146 (58.4%) males and 103 (41.2%) females were surveyed for the current study and one respondent did not disclose the gender.

Measures

The constructs in this study were developed by using measurement scales adapted from prior studies. A modification was made to the scale to fit the purpose of the study. All constructs were measured using Five - point Likert scale which anchors strongly Disagree (1) and strong Agree (5). All statements used in the questionnaire were positively worded.

Brand Trust was assessed through the six item scale in the current study. Four items of brand trust scales were adapted from Md Anber (2012) where reliability was reported to be 0.811. The brand trust scale was modified to make fit for the current study, therefore two more statements were added into the questionnaire which were 'this brand makes me fresh' and 'this brand makes me happy'. The modified brand trust scale was then tested through cronbach's Alpha reliability test which was found to be 0.840. The six items were measured and these were: This brand makes me happy, this brand makes me fresh, I rely on this brand, this brand is safe for my teeth, I trust this brand because its honest and I trust this brand as it meets my expectations.

Perceived value was assessed through the eight item scale. Three items were adapted from Md Anber (2012) and these are: This brand itself is worthy, this brand is reasonably priced, and this brand offers value for the money. Where, value of Cronbach's alpha reliability was reported as 0.827. The questionnaire of perceived value was modified to make fit for the current study. Few more statements were added to it i.e. 'I perceived this brand because it is easily available', 'I perceived this brand because it's available in different flavours', 'I perceived this brand because sometimes I get offers on this brand', 'this brand makes me consistently aware of its promotion campaign', and 'I perceived this brand because it has been certified by IDA'. Then, the value of Cronbach's alpha was found to be 0.698 which was found to little less from the universally accepted standard value but still as the value is above 0.6 it was accepted.

Brand Loyalty was assessed through the twelve item scale adapted from Md Anber (2012). Brand loyalty scale was modified to make adequate fit for the current study. The value of reliability reported in the previous study was 0.797 and the value of Cronbach's Alpha found in the current study was 0.845. The statement was modified and reported as: 'I will buy this Brand again in the near future', 'to buy other products of this Brand, as this Brand is my first choice among the competitors Brands', 'I will buy the same Brand, continue to be loyal customer for this Brand', 'willing to pay a price premium if it would be substantially cheaper', 'will say positive things about this Brand', 'I will recommend this Brand to someone who seeks my advice', 'recommend this Brand to other people', 'this Brand my first choice' and 'get good value for my money by using this Brand'.

Factor Analysis

Factor Analysis of Brand Trust

By applying the Kaiser Meyer Olkin measure (KMO) sampling adequacy of brand trust was found to be 0.863 indicating that the brand trust sample was adequate enough. The result of Bartlett's test of sphericity has been tested through the Chi-square value, which was found to be 521.982 which is significant at the 0 % level of significance. Therefore, the null hypothesis stating 'item to item correlation is an identity matrix' is rejected, indicating that the data is suitable for factor analysis. Only one factor was extracted.

Principal component analysis was applied to find out the underlying factors of the questionnaire. In the current study, all the statement of brand trust converged into a single factor having Eigen value of 3.347 with a total variance of 55.781. The statements with their loading values were : Makes me fresh (0.840), makes me happy (0.779), Safe for my teeth (0.767), Meet my expectation (0.702), Rely on this brand (0.699) and Brand is honest (0.681). Factor analysis resulted into one underlying factor of Brand Trust.

Factor Analysis of Perceived Value

Kaiser Meyer Olkin measure (KMO) of sampling adequacy of perceived value was found to be 0.763 indicating that total sample of the perceived value was adequate. The result of Bartlett's test of sphericity has been tested through the Chi-square value, which was found to be 284.087 which is significant at the 0 % level of significance. Therefore, the null hypothesis stating 'item to item correlation as identity matrix' was rejected, indicating that the data was suitable for factor analysis. Only one factor was extracted.

Principal component analysis was applied to find out the underlying factors of perceived value. All the statements of perceived value converged into two factors which were named as the brand attribute and price sensitivity. Brand attributes having Eigen value of 2.606 with a total variance of 24.807 consisted of following statements : different flavour (0.740), promotion campaign (0.682), get offers (0.662), certified by IDA (0.476) and easily available (0.464) and Price sensibility having Eigen value 1.300 with total variance 24.016 consisted of following statements : value for money (0.820), reasonably priced (0.703) and worthy (0.671).

Factor Analysis of Brand Loyalty

Kaiser Meyer Olkin measure (KMO) of sampling adequacy of Brand Loyalty was found to be 0.865 indicating that total sample of the Brand Loyalty was adequate. The result of Bartlett's test of sphericity has been tested through the Chi-square value, which was found to be 805.584 which is significant at the 0 % level of significance. Therefore, the null hypothesis stating 'item to item correlation as identity matrix' was rejected, indicating that the data was suitable for factor analysis. Two factors were extracted after applying factor analysis.

Principal component analysis was applied to find out the underlying factors of the of brand loyalty. In the current study, all the statements of brand loyalty converged into two factors which were named as believability and loyalty intention. Believability having Eigen value of 4.460 with a total variance of 24.898 consisted of following statements: recommended to others (0.790), seek my advise (0.732), say positive things (0.606), substantially cheaper (0.583), get good value (0.559), choice for coming year (0.508) and buy other product of this brand (0.470). Loyalty intention emerged as the second factor of brand loyalty having Eigen value of 1.192 with a total variance of 24.200 which consisted of following statement: loyal customer (0.809), first choice among brand (0.694), buy in near future (0.674), buy the same brand (0.495) and pay price premium (0.491).

Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) was employed first before proceeding to structural equation models to see the relationships between observed measures or indicator and latent variables or factors. In this research, CFA was employed to test the clarity of the factor structure.

A twelve items scale of brand loyalty was adapted from Md Anber (2012) and exploratory factor analysis was employed to identify the latent factor. After applying EFA, two factors were extracted which were named as reliability and loyalty intention. These factors were subjected to confirmatory analysis to identify the latent factor of brand loyalty. It was found that due to these statements of Brand loyalty (Q3, Q5, Q10, & Q12) CFA model was not found to be fit. Hence, these statements were eliminated after applying CFA. After the deletions of these questions model was found to be a good fit. The value of $\chi2$ was found to be 22.158 (DF = 19 and P = 0.276). The standardized regression weight of the different items of brand loyalty was found to be more than the threshold value of 0.5 except statement number one. Hence, the model was found to be a good fit as indicated by regression weight. The final scale of Brand loyalty was confirmed using CFA and the statements which were finalized and standardized of the construct were: 1. I intend to buy this Brand again in the near future. 2. I intend to buy other products of this Brand. 4. The next time, I need that product; I will buy the same Brand. 6. I am willing to pay a price premium over competing products to be able to purchase this Brand again. 7. I would only consider purchasing this brand again, if it would be substantially cheaper. 8. I will say positive things about this Brand to other people. 9. I recommend this Brand to someone who seeks my advice. 11. I consider this Brand my first choice in the next coming few years.

An eight items scale of perceived value was modified. Three statement were taken from Md Anber (2012) assessed and five statements were developed. Exploratory factor analysis was employed to identify the latent factor. After applying EFA, two factors were extracted which were named as brand attribute and price sensitivity. These factors were subject to confirmatory factor analysis to identify the latent factor of perceived value. Only question number 7 was found to be weak after applying CFA. Hence, this statement was eliminated after applying CFA. After deletion of this statement CFA was found to be a good fit. The results of CFA indicated through $\chi2$ value. The value of $\chi2$ was found to be 15.010 (DF = 13 and P = 0.307). The standardized regression weights of the different items of perceived value were found to be more than the threshold value of 0.5. Hence, the model was an absolute good fit as it is indicated by regression weight. The final scale of perceived value was confirmed using CFA and the statements were finalized and standardized for the scale of the Perceived Value Statements were: 1. I perceived this brand because it is easily available. 2. I perceived this brand because it's available in different flavours. 3. I perceived this brand because sometime I get offers on this brand. 4. This brand makes me constantly aware through its promotion campaign. 5. This brand itself is worth. 6. This brand is reasonably priced. 8. I perceived this brand because it is certified by IDA

A six item scale of customer trust was developed and modified. Four items of brand trust scales were adapted from Mohammad Anber (2012) and two statements were developed and incorporated with the scale of brand trust. Exploratory factor analysis was employed to identify the latent factors. After applying EFA, all the statement used converged into single factor. Hence, this factor was named as brand trust. Although, there was no requirement to apply CFA but for knowing the regression weight, CFA was applied. It was found that the initial standardized regression weight of all items was found to be more than the threshold value 0.5. Hence, none of the statement was eliminated after applying CFA. The value of $\chi 2$ was found to be 15.568 (DF = 9 and P =.079). The standardized regression weights of the different items of customer trust were found to be more than the threshold value of 0.5. Hence, the model is an absolute good fit as it is indicated by regression weight. Now, the final scale of Brand Trust was confirmed using CFA and the statements were finalized of the questionnaire which were: I believe that this brand will make happy, I believe that this brand makes me fresh, I rely on this brand, this brand is safe for my teeth, I trust this brand as an honest brand, and I trust this brand as it meets my expectations.

Table 1: Absolute Fit Measures of the Constructs

				Absolute Fit Measures					
	Criteria	$\chi 2$	DF	$\chi 2$/DF 1< 2	RMR < 0.05	RMSEA < 0.08	GFI ≥0.90	AGFI ≥0.90	P
Brand Loyalty	Obtained	22.16	19	1.166	0.036	0.026	0.98	0.963	0.28
Perceived value	Obtained	15.01	13	1.155	0.041	0.025	0.983	0.963	0.31
Customer Trust	Obtained	15.57	9	1.179	0.03	0.054	0.981	0.955	0.08

Chi-square Fit Indices

Chi-square is considered as the global fit measure of overall model fit. If it is significant then it indicates the rejection of the null -hypothesis, indicating that the model does not fit for the chosen population. Chi-square ($\chi 2$) value of 22.158 (d f=19) in the current model of Brand Loyalty was found to be a good fit. Therefore the null hypothesis was rejected, indicating that model has a good fit. Statistics reveal that the p value is 0.276 which is far above from the threshold value of 0.5 indicating a good model fit. Results show that chi-square/DF ratio is 2.170 which suggest a model fit to be good. Chi-square ($\chi 2$) value of 15.010 (d f=13) in the current model of perceived value was found to be a good fit. Therefore the null hypothesis was rejected, indicating that model has a good fit. Statistics reveal that the p value is.307 which was found far above from the threshold value 0.5 indicating a good model fit. Results show that chi-square/DF ratio is 1.155 which suggests a model is shown fitted. Chi-square ($\chi 2$) value of 15.468 (d f=9) in the current model of customer trust was found to be a good fit. Therefore the null hypothesis was rejected, indicating that model has a good fit. Statistics reveal that the p value is 0.079 which far above from the threshold value 0.5 indicating a good model fit. Results show that chi-square/DF ratio is 1.179 which suggests a model fit to be good. According to Hatcher (1994), the chi-square/DF ration should be at least 2.

Goodness of Fit Indices

The fit indices of CFA for brand loyalty are showing Goodness of Fit Index (GFI) 0.980. The adjusted goodness of the fit Index (AFGI) shows a value of 0.963 implying a good model fit. The parsimonious goodness of fit index (PGFI) is 0.517. The fit indices of CFA for perceived value are showing Goodness of Fit Index (GFI) 0.983. The adjusted goodness of the fit Index (AFGI) shows a value of 0.963 implying a good model fit. The parsimonious goodness of fit index (PGFI) is 0.465. The fit indices of CFA for customer trust are showing Goodness of Fit Index (GFI) 0.981. The adjusted goodness of the fit Index (AFGI) shows a value of 0.955 implying a good model fit. The parsimonious goodness of fit index (PGFI) is 0.420.

Construct Reliability of Brand Loyalty, Perceived Value and Customer Trust

The main reason of using CFA is to evaluate the construct validity; the ability of the measurement items to reproduce the latent constructs (Hair et al., 2010). Construct validity was evaluated by evaluating the convergent validity and the discriminant validity (Hair et al., 2003). The convergent validity is assessed by factor loading, the average variance extracted and composite reliability.

Construct reliability (CR) measures the reliability for the constructs and internal consistency. Reliability of 0.7 or more than it is considered to be good. Reliability of 0.7 or more is considered to be good; though, a construct of 0.6 value can also be accepted if the other constructs in the model have good reliability (Hair et al., 2009). Bagozzi and Yi (1988) think composite reliability to be good, starting from the value of 0.6. Reliability between.6 and.7 may be acceptable under conditions that other indicator like factor loadings and AVE of a model's construct validity are good. A high value of reliability indicates that a high internal consistency exists.

Table 2: Summary of Construct Reliability of Variables

Construct	*Dimensions*	*Items*	*Reliability*
Brand Trust	Trust	6	0.9
Perceived value	Brand Attributes	5	0.86
	Price sensitivity	2	0.75
Loyalty intentions	Reliability	5	0.84
	Loyalty intention	3	0.76

Construct Validity

According to Hair et al. (2006) "construct validity is crucial to ensure that a set of items actually represents the theoretical latent construct these variables were designed to measure". Construct validity is made up of three components: Convergent validity, Discriminant validity and Nomological validity

Content Validity – In the framework of content validity, the researcher must assess that each item of the scale deals effectively with the content of the construct that has to be measured. The development process of the scale was based on the purification of a list of items, which stemmed from a large review of the literature and also from qualitative interviews with experts. These precautions should ensure a good content validity.

Convergent Validity

According to Carmines and Zeller (1979) Convergent validity refers to the degree of agreement in two or more measures of the same construct". Convergent validity was checked using three different methods.

- Factor loadings- The factor loadings are assessed based on the fact that they should be greater than the minimum cutoff value. As all the values were greater than 0.5 hence it can be said that the scale possessed convergent validity. All the critical ratios (t-value) were significantly above the threshold of ± 1.96 ($p < 0.001$).
- AVE (Average Variance Extracted). To establish the convergent validity the AVE should be greater than 0.5 but a value above 0.4 can be accepted provide other measures indicate a good validity. The results of AVE in the table below indicated that the variance extracted are above 0.4 so it can be said that they possess convergent validity.

Table 3: Showing Standard Regression Weights and AVE

	Factor	*Manifest Value*	*Standard Regression weight*	*AVE*
	Brand Trust	BT1	0.74	0.47
		BT2	0.83	
		BT3	0.61	
Brand Trust		BT4	0.7	
		BT5	0.6	
		BT6	0.62	
	Price Sensitivity	PS5	0.74	0.42
Perceived value		PS6	0.61	
	Brand Attribute	BA1	0.75	0.45
		BA2	0.64	
		BA3	0.63	
		BA4	0.61	
		BA8	0.6	
		RE7	0.62	0.4
Brand Loyalty	Reliability	RE8	0.67	
		RE9	0.64	
		RE11	0.6	
		RE2	0.61	
	Loyalty Intentions	LI4	0.54	0.4
		LI6	0.75	
		LI1	0.6	

Reliability: Reliability of 0.7 or higher indicates convergent validity and high internal consistency. The reliability of the different measures has been measured previously and they have reliability above 0.6 which indicates towards a good convergent validity.

Discriminant Validity

To study discriminant validity, the average variance extracted (AVE) in exploratory factor analysis in pairs of all the constructs should be estimated. Discriminant validity exists when AVE is greater than the squared correlation between pairs of factors (Fornell and Larcker, 1981). The results of the tests of AVE found significantly satisfactory. The upper diagonal shows the results of the tests and the results of the inter-correlations squared between the constructs shown in the lower diagonal.

Table 4: Showing Discriminant validity

Factor	*Brand attributes*	*Price sensitivity*
Brand attributes	**0.45**	
Price sensitivity	*0.36*	**0.42**

Factor	*Reliability*	*Loyalty intention*
Reliability	**0.4**	
Loyalty intention	*0.39*	**0.4**

Structural Equation Modelling (SEM)

In order to test the relationships between constructs as hypothesized in the proposed theory, the measurement model is transformed to the structural model (Hair et al., 2010). SEM is specified by the transformation of covariance's between constructs and into path estimates; the hypothesized causal relationships. Exogenous constructs, independent predictors, are identified and the relationship between them is fixed at zero; while, for endogenous constructs, outcomes are identified, and Error terms are added to them since they are not fully explained. SEM is a comprehensive statistical approach for testing hypotheses about relationships among observed and latent variables. SEM is an addition to other multivariate techniques, particularly, factor analysis and multiple regression. SEM can be defined as a "multivariate technique combining aspects of multiple regression and factor analysis to estimate a series of inter-correlated dependent relationships simultaneously". The main benefit of using this method is that it does concurrent testing of all the relationships in one model and thus gives a better view of relationships between constructs.

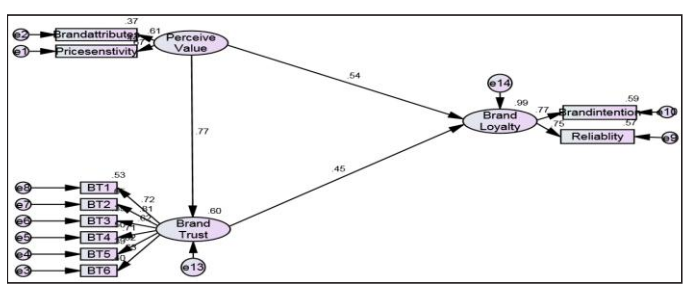

Fig. 1: Final SEM Model Showing Relationship between the Constructs

This is an SEM Process where, Maximum Likelihood estimation method was employed so as to evaluate the hypothesized relationship between brand trust, perceived value and brand loyalty. The method estimates is based on maximum probability criteria. It works on the principal that the observed covariances are drawn from a population assumed to be the same as that reflected in the co-efficient estimates. Maximum likelihood chooses those estimates which have the greatest probability of replicating the observed data. The above figure 1 represents the path diagram in order to examine the hypothesized relationship between Brand Trust, Perceived Value and Brand Loyalty. In the current model, three cause and effect relationship were establish between Perceived value and Brand Trust; Brand Trust and Brand Loyalty and Perceived Value and Brand Loyalty. These cause and effect relationship were examined through SEM model. The following table shows the relationship obtained between the different variables.

Table 5: Relationship between the Constructs

			Estimate	*S.E.*	*C.R.*	*P*
F2	<---	F1	0.423	0.071	5.955	***
F3	<---	F1	1.717	0.516	3.328	***
F3	<---	F2	1.579	0.777	2.031	0.042
Pricesenstivity	<---	F1	1			
Brandattributes	<---	F1	1.963	0.251	7.822	***
BT6	<---	F2	1			
BT5	<---	F2	1.114	0.134	8.321	***
BT4	<---	F2	1.246	0.135	9.212	***
BT3	<---	F2	1.018	0.122	8.331	***
BT2	<---	F2	1.384	0.137	10.109	***
BT1	<---	F2	1.33	0.142	9.365	***
Reliablity	<---	F3	1			
Brandintention	<---	F3	0.659	0.056	11.828	***

Regression Weights: (Group number 1 - Default model)

The above table shows mixed results in the current study where all the direct effects were tested among used variable in the current study. Where, few results were found to be significant and the rest of them were insignificant.

Absolute Fit Indices

Model fit means the degree to which a hypothesized model is consistent with the collected data. There are many fit indices suggested. The selection of the indices depends on the judgement of the researcher which, according to him best fits the model. Evaluating the fit of a particular model is the most essential elements of SEM. It decides the acceptance or rejection of the model. The indices provide the most fundamental indication of how well the proposed theory fits the data. Included in this category is the Chi-square test, RMSEA, GFI, AGFI, RMR and SRMR.

Chi-Square

The most commonly used tests for assessing model fit it the chi-square ($\chi 2$) goodness of fit test. A significant chi-square indicates that the null hypothesis will be rejected and an insignificant chi square indicates that the null hypothesis would be accepted. A good model fit would provide and insignificant result at a 0.05 threshold. Thus, the Chi-Square statistic clearly revealed that value of Chi-square test was found to be 40.056 which is significant at 0.155 level of significance and degree of freedom was 32. According to Hatcher (1994), the chi- square/DF ration should be at least 2. The degree of freedom from chi-square is 1.252, less than the cut off value of 2.

Table 6: Model Fit Statistics of Final Model

			Absolute Fit Measures					
	χ2	*DF*	*χ2/DF*	*RMR*	*RMSEA*	*GFI*	*AGFI*	*P*
Criteria			1< 2	< 0.05	< 0.05	≥0.90	≥0.90	
Obtained	40.06	32	1.252		0.032	0.97	0.947	0.16
			Incremental Fit Measures					
	NFI	RFI	IFI	TLI	CFI			
Criteria	≥0.90	≥0.90	≥0.90	≥0.90	≥0.90			
Obtained	0.96	0.94	0.992	0.998	0.992			

Goodness of Fit Indices

The result of model fit indicates that most of the goodness of fit indices were found to be good with their relative recommended thresholds. The fit indices of SEM are showing (GFI) of 0.969. The adjusted goodness of the fit Index (AGFI) shows a value of 0.947 implying an acceptable model fit. The (PGFI) value was found to be 0.564 and this value should be below from 0.5 where it was found to be a little weak. The model result indicates the other goodness of fit indicate a good parsimony fit. The model result indicates that the other goodness of fit indices was also found to be good with respect to their relative recommended thresholds; CFI= 0.992; NFI = 0.960; TLI = 0.998. The results implied that it has a good model fit.

Badness of Fit Indices

The RMSEA value was found in 0.032 which is less than the threshold value 0.05 therefore it can be considered good. According to Diamantopoulos and Siguaw (200) RMSEA is generally regarded as one of the most informative fit indices. The RMR measures residual variances which reveal the average amount of variance and covariance's which are not accounted for by the model. Usually value less than.05 is regarded as an indication of good model. In the current model, RMR was found to be.032 indicating a good fit.

Discussion

H01: There is no cause and effect relationship between Perceived Value and Brand Trust.

Ahmed et al (2014) mentioned in their study that perceived value contributes towards creating Brant Trust among customers, also supported by Chung et al (2015), Ok et al (2011). The hypothesis was tested through the results of SEM using AMOS 18. The results reveal the significance of the path estimate with a path estimate of 0.423, t-value = 5.955, and p =0.000 and it was found to be significant at 0.0001 level of significance between Perceived Value and Brand Trust. Therefore, the hypothesis H01 is not supported, indicating that there is cause and effect positive relationship between perceived value and brand trust in context of FMCG Product.

H02: There is no cause and effect relationship between Perceived value and Brand Loyalty.

Chung et al (2015), found positive linkage between Perceived value and Brand Loyalty , supported by Mirzaee et al (2013), Gwin (2009), Zhang et al (2013), Ok et al (2011). The hypothesis was tested through SEM using AMOS 18. The results reveal the significance of the path estimate with a path estimate of 1.717, t-value= 3.328, and P=0.00 and it was found to be significant at 0.0001 level of significance between brand perceived value and brand loyalty. Therefore the hypothesis H02 is not supported, indicating that there is significant cause and effect relationship between perceived value and brand loyalty in the context of FMCG Product.

H03: There is no cause and effect relationship between Brand trust and Brand Loyalty.

Srivastava (2007) has mentioned in his study that Brand loyalty in terms of quality, novelty and reputation influence in case of toothpaste. Ahmed et al (2014), Chung et al (2015), Mirzaee et al (2013), Ok et al (2011) also supported the hypothesis. Although the study was done on durables. Some more studies like Zhang et al (2013) on laundry services proved the significant effect of Brand on loyalty. The hypothesis was tested through of SEM using AMOS 18. The results reveal the significance of the path estimate with a path estimate, which was found to be 1.579, with t value = 2.031, and P= 0.042 and it was to be significant at 0.05 level of significance between brand trust and Brand Loyalty. Therefore the hypothesis H03 is also supported but at 0.05 level of significance, indicating that there is significant cause and effect relationship between brand trust and brand loyalty in the context of FMCG Product.

Nomological Validity

The results of the relationship tested in the current research are in line with the prior researches conducted by various researchers all over the world in the same or the related field. Tested relationship through SEM was found to be significant in the current study and the similar results were also found in the many previous researches. Hence, the nomological validity was found to be good.

Implication of the Study

Current study is very useful and can be utilised by the managers who engage themselves in understanding perceived value, brand trust and brand loyalty. These variables can be used to understand the customers' needs and making them satisfied. The study can be used by different researcher to evaluate the different factors in different prospective. It will also help the manager in knowing the parameters through which they can more satisfy to their customer. The conceptual Information from this study can also be utilized in terms of developing brand loyalty. This study can also be used as a foundation for researchers to conduct further studies in different context.

Suggestion and Limitation

In the current study, only 250 respondents were used as sample which cannot be considered as good enough therefore this should be improved in the further researches. The current study used non- probability sampling technique to collect the response from respondents which cannot be considered to be a foolproof techniques. Hence, probability technique should be used to collect respondents so that study would become more generalized. The current study was conducted in Gwalior city only which limits the scope of the study. Hence, the area of data collection should also be increased.

Conclusion

The driving purpose behind pursuing this study was to determine the relationship between brand trust, perceived value and brand loyalty. Brand Loyalty was chosen as the dependent variable and the impact of above - mentioned independent variables were checked on it. Through our analysis, we came to know that there was a relationship of brand loyalty with all of the independent variables, which implies that the null hypothesis was rejected. Independent variables are positively and significantly linked with the dependent variable, which shows the Brand Loyalty can be achieved by improving Brand Trust and Perceived Value. The purpose of this study was to develop and implement a method to increase brand loyalty of the customers for toothpaste brand. The study also explored the relationship between brand trust, perceived value and brand loyalty in FMCG industry.

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