DIRECT AND INDIRECT EFFECT OF BRAND CREDIBILITY, BRAND COMMITMENT AND LOYALTY INTENTIONS ON BRAND EQUITY

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ABSTRACT

Brand equity has been and will be an area of interest for marketing managers. All marketing efforts are directed toward the development of brand equity. Therefore efforts are taken among the researchers, to understand the concept of brand equity as deep as possible. This paper attempts to understand the interrelationships among key formative indicators of brand equity, using belief-attitude-intention hierarchy of effects. The formative indicators include brand credibility, brand commitment, and loyalty intentions. Using Sequential Chi-square Difference Test in Structural Equations Modelling, the researchers identified the mediating role of brand commitment and loyalty intentions, in the formation of brand equity.

Keywords: brand credibility, brand commitment, loyalty intentions, brand equity, structural equations modelling (SEM), sequential chi-square difference tests (SCDT)

JEL Classification: M31

1. INTRODUCTION

The most important asset of a company is the brand they own. A strong brand is a competitive advantage, a barrier for entry in some markets, easier acceptance among distributors and consumers etc. for the organisation it owns (Farquhar 1989). For customers, a brand can simplify the choice process, promise quality, reduce risk (Keller & Lehmann 2006) and also motivate repeated buying (Aaker 1996 & Keller 2001). Brand equity is defined as the 'added value' which a given brand endows the product (Farquhar 1989; Jones 1986; Leuthesser 1988).

This study tried to understand how the efforts taken by the marketers get converted to brand equity. The researchers tried to explain the hierarchy of factors in the formation of brand equity. For this we have looked at the role of brand credibility, brand commitment, and loyalty intentions. Even though the role of commitment is highly researched in the context of behaviour (e.g.: Cunningham 1967; Johnson, Herrmann, & Huber 2006; Kim, Morris, & Swait 2008; Verhoef 2003), its role in the formation of brand equity is rarely looked into. Thus, the researchers would like to pose the following research questions: What would be the direct and indirect effect of credibility on brand equity? What could be the specific role played by commitment in the said direct and indirect effect?

Using attitude theory (Ajzen 1991) and arguments of Atilgan, Aksoy and Akinci (2005) and Yoo and Donthu (2001) researchers have proposed a model. The proposed model was tested among a sample of students on the purchase of the product, deodorant. The results will have direct implications on the strategies adopted by the marketers.

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The article is arranged as follows: first we present the review of literature leading to the development of a conceptual model. This is followed by the discussion on the methodology adopted. Finally the results obtained are presented followed by discussion.

2. LITERATURE REVIEW

2.1. Brand equity

Basically, there are two broad approaches in defining brand equity, the first approach from firm perspective and other from customer. The first approach is based on the brand equity outcomes such as price and market share while the second approach has attitudinal associations (Chaudhuri 1999). Accordingly, there are different definitions for brand equity (Aaker 1991, 1996; Keller 1993). Aaker (1991) defined brand equity as "A set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or a service to a firm and/or to that firm's customers". Aaker (1996) also proposed a set of ten measures, grouped into five categories, namely measures in loyalty, perceived quality, associations and awareness, all taken directly from customers; and a set of market behaviour (market share and price and distribution indices) measures which are derived from market place. While Keller (1993) defined Consumer based brand equity (CBBE) as "the differential effect that the brand knowledge has on customer responses to the marketing of that brand. A brand is said to have positive customer based brand equity when customers react more favourably to a product and the way it is marketed when the brand is identified, as compared to when it is not." CBBE model proposed four steps to be taken for building a strong brand, namely brand identity, brand meaning, brand responses and brand relationships. He also proposed that brand building depends on six building blocks - salience, performance, imagery, judgments, feelings, and resonance. Keller also emphasized the order in which these building blocks need to be placed.

Brand equity has alternate definitions and these alternate definitions vary much (Ha, Janda, & Muthaly 2010; Rangaswamy, Bruke, & Oliva 1993). Majority of these definitions take some combination of awareness, preference, loyalty etc. Kartono and Rao (2005) pointed out that there may not be a common method of creating an exhaustive list of formative indicators for brand equity for all brands, while Aaker (1996); Erdem and Swait (1998) pointed the need of a customized approach depending on the product. If so, how the brand equity is developed out of the formative indicators selected?

2.2. Loyalty intentions

Jacoby and Chestnut (1978) had considered different researches in this area of brand loyalty and identified that until then, fifty-five different operational definitions existed for brand loyalty. They divided these definitions of brand loyalty into three main categories: Operational definitions falling under behavioural approach, attitudinal approach and the composite of both behavioural and attitudinal approach. Under behavioural approach, brand loyalty indices are based on the actual purchasing behaviour of consumer or self-reporting of these actual behaviour, while under attitudinal approach are those based on the preference statements of likely behaviour, and the composite ones are those which have some combination of behavioural and attitudinal aspects. The attitudinal indices of brand loyalty are based on the statements of preference or intentions to behave and not actual purchase behaviour (e.g. Guest 1955; Jacoby & Olson 1970; Johnson et.al. 2006; Monroe & Guiltinan 1975; Reynolds et.al. 1974). Research conducted by Chaudhuri (1999) has found that brand loyalty has a positive effect on brand equity and also acted as a mediator between brand attitude and

brand equity outcome measurements. Findings by Atilgan et.al. (2005); Joseph and Sivakumaran (2009) and Yoo and Donthu (2001) supported the view that loyalty has a direct positive effect on brand equity. Thus we propose the following hypothesis:

H1: *Loyalty intentions have a direct positive effect on brand equity.*

2.3. Brand commitment

In psychology, the concept of commitment is regarded as having intentional aspects, as evidenced by Kiesler, (1971) and his definition of commitment: "the pledging or binding of an individual to behavioural acts". Commitment level is a psychological state that globally represents the experience of dependence on a relationship, a long-term orientation towards it, feelings of attachment to a partner and a desire to maintain the relationship. Cunningham (1967) was one of a few early researchers viewing brand commitment as an antecedent of loyalty intentions. A similar view of commitment was also taken by: Bloemer and Kasper (1995); Kim et.al. (2008); Knox and Walker (2001); Mathew, Thomas and Khader (2011) and Verhoef (2003). Building attitudinal attachment is one of the major steps indentified in building consumer based brand equity (Keller 2001) and commitment is one of the parameters used by market research firms for evaluating brand equity on a regular basis (Winters 1991). Findings of Chaudhuri (1999) also support this view that customers with commitment along with a sense of loyalty have enabled the brand to gain higher prices, positive word of mouth and lower advertising cost in the long run. Based on these arguments we propose the following hypotheses:

H2: *Brand commitment has a direct positive effect on loyalty intentions.*

H3: *Brand commitment has a direct positive effect on brand equity.*

2.4. Brand credibility

Erdem and Swait (1998) define brand credibility as the believability of product position information contained in a brand, which entails consistently delivering what is promised. It has two dimensions, trustworthiness and expertise. Trustworthiness means that it is believable that a brand will deliver what it has promised, and expertise implies that the brand is believed capable of delivering the promises. A firm might use its marketing mix strategies for its brand, like high price, packaging, expensive endorsers as signal for quality, enhancing the brand's credibility (Kihlstrom & Riordan 1984; Spence 1974), to communicate to its customers. These effects in turn increase consumer expected utility and are considered as the added value a brand gives a product (Erdem & Swait 1998). A customer who perceives higher credibility with the offering stands to consider the efforts taken by firm for an interaction with him/her more favourably, leading to commitment with the brand (Ganasan 1994).

H4: *Brand credibility has a direct positive effect on brand commitment.*

H5: *Brand credibility has a direct positive effect on brand equity.*

3. CONCEPTUAL MODEL

Conceptual model (Figure 3.1) posits that brand credibility builds brand equity directly as well as indirectly through brand commitment. Brand commitment, in turn, directly contributes to the building of brand equity and also indirectly builds loyalty intentions, while loyalty intentions contribute to brand equity. More specifically, the researchers want to test whether commitment and loyalty intention would mediate the relationship between credibility and brand equity.
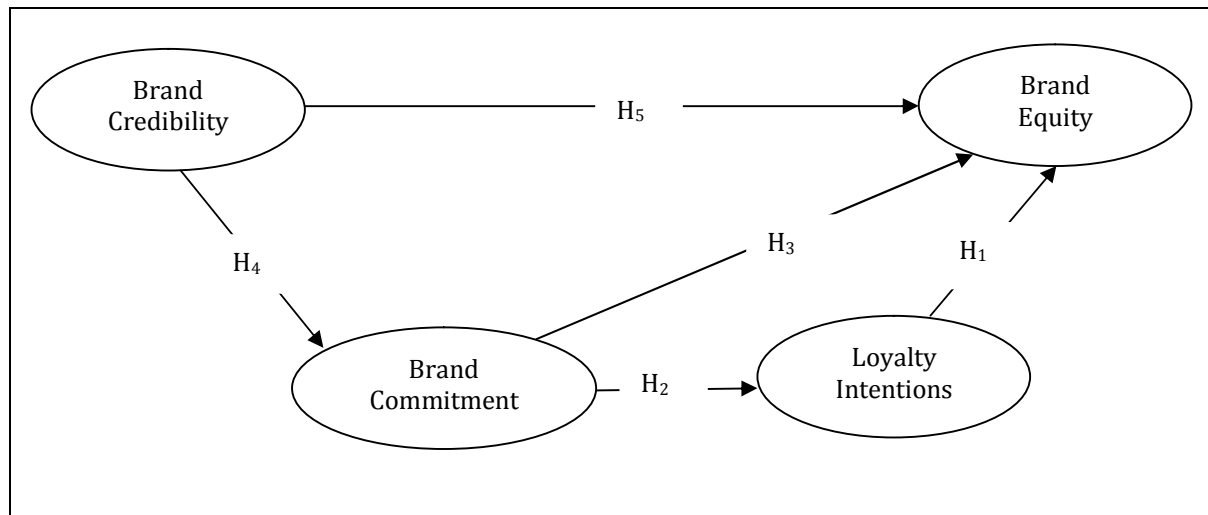
Figure 3.1. Proposed Conceptual Model

4. RESEARCH METHOD

4.1. Sample

The sample for the study is limited to 275 students doing their graduation or post graduation in a major university in Kerala, India. All the respondents who participated in this survey had bought and were using a deodorant for themselves.

During the survey they were asked about their favourite brand of deodorant, the one that

Table 4.1. Model Constructs, Survey Measures, Scale Source and Alpha Values

Construct	Survey measures	Scale adopted from	Alpha value
Brand credibility	1. My brand of deodorant delivers what it promises 2. My brand's product claims are believable 3. You just can't believe what the ads say about my brand of deodorant 4. My experience with my brand of deodorant makes me wary of their claims 5. My brand has a name you can trust 6. My brand of deodorant is at the forefront of using technology to deliver a better product 7. My brand of deodorant reminds me of someone who is competent and knows what he/she is doing.	Erdem & Swait (1998)	0.837
Brand commitment	1. I am really attached to the brand of deodorant that I use 2. I stick with my usual brand of deodorant because I know they are best for me 3. I am committed to my brand of deodorant	Coulter, Price & Feick (2003)	0.902
Loyalty intentions	1. I generally buy the same brands that I have always bought 2. Once I get used to a brand I hate to switch 3. If I like a brand, I rarely switch from it just to try something different 4. I always tend to buy the same brand	Lichtenstein, Netemeyer, & Burton (1990)	0.872
Brand equity	1. Even if another brand has same features as my brand of deodorant, I would prefer to buy my brand 2. If I have to choose among brands of deodorant, my brand is definitely my choice 3. If I have to buy a deodorant, I plan to buy my brand even though there are other brands as good as my brand 4. Even if another brand has the same price as my brand I would still buy my brand of deodorant. 5. If there is another brand as good as my brand, I prefer to buy my brand of deodorant 6. If another brand is not different from my brand of deodorant in any way it seems smarter to purchase my brand 7. It makes sense to buy my brand of deodorant instead of any other brands, even if they are the same.	Yoo & Donthu (1997)	0.945

they have repeatedly purchased and the one they wanted to buy in the future. The responses for the survey questions were taken for the brand of deodorant selected individually by each respondent.

Approximately 34% of the respondents are female and the remaining ones are male and the sample represents a relatively homogenous age group of 19 to 26.

4.2. Survey measures

The measures used in the survey are given in Table 4.1. The respondents rated all measures on Likert-type scales (Completely disagree - completely agree).

5. RESULTS

The proposed model was tested in three stages. First the reliability of the measurement tools was found. Second a Confirmatory Factor Analysis (CFA) was performed to establish the overall fit of the measurement model, as well as for assessing the validity of the tools used. The third test was to see whether the data supported the proposed model and the hypotheses stated.

5.1. Reliability and validity

The reliability of measures used is estimated using Cronbach's alpha (Nunnally 1967). Alpha value ranges from 0.872 to 0.945 except for brand credibility where it is 0.730. Two items for the scale brand credibility were found to have a very low value for item to total correlation (0.041 and 0.084). Those two items were deleted and thus a substantial improvement on Cronbach's alpha to 0.837 was obtained for the scale brand credibility. The Alpha values now ranged from 0.837 to 0.945 and found to be at an acceptable level (Davis 1964; Nunnally 1967). Construct reliability, convergent validity, discriminant validity and nomological validity were estimated using the methods suggested by Fornell and Lacker (1981). The construct

reliability estimates were 0.834, 0.903, 0.944 and 0.879 respectively for credibility, commitment, equity and intentions and found to be showing high internal consistency. The standardized factor loadings obtained from the measurement model (CFA) shows that all indicators significantly loaded to the respective factors as expected. The standardized loading ranges from 0.514 to 0.933 and all p values < 0.01. Also the Average Variance Extracted (AVE) values were 0.510, 0.756, 0.707 and 0.652 for brand credibility, brand commitment, brand equity and loyalty intentions constructs respectively, showing that there is an adequate convergent validity (AVE is expected to be more than 0.5). To evaluate the discriminant validity, we checked whether AVE estimates were larger than the corresponding squared interconstruct correlation estimates. This condition was satisfied in every case. For nomological validity, the correlations between the constructs, were looked at and found to be positive and significant (p<0.01).

The values of fit measures obtained from CFA are; Goodness of Fit Index (GFI) = 0.910; Adjusted Goodness of Fit Index (AGFI) =0.881; Normed Fit Index (NFI) = 0.937; Relative Fit Index (RFI) = 0.926; Comparative Fit Index (CFI) = 0.971; Root Mean Square Error of Approximation (RMSEA) = 0.054; Chi-Squared with 144 degrees of freedom, χ^2 (144) = 257.599, p<0.05 and Normed χ^2 =1.789. The values show an acceptable overall fit and show that the measurement model is theoretically and statistically acceptable.

5.2 Model estimation

The researchers have created three models for estimating the direct and indirect effect of credibility and commitment on brand equity: an Unconstrained Model (M_u) including all the stated hypotheses H_1 to H_6 and two Nested Models (Constrained Models). In the first nested model (M_t), the path coefficient for the path, brand commitment ⯈ brand equity is

constrained to be equal to zero, while the second nested model (M_c) path coefficients for commitment ⮕ equity and credibility ⮕ equity are constrained to be equal to zero. Anderson and Gerbing (1988) defined that "a model M_2 is said to be nested in another model M_1 if the set of freely estimated parameters in M_2 is a subset of those in M_1 and is denoted as $M_2 < M_1$. Also a saturated structural model, M_s, is the one in which all parameters (unidirectional paths) relating the constructs to one another are freely estimated and Null structural model M_n is one in which all parameters relating to one another are constrained to be zero". Accordingly, the five models can be expressed as $M_n < M_c < M_t < M_u < M_s$, based on the number of freely estimated parameters.

A comparison of these nested models and the unconstrained model brought out the mediation of brand credibility and brand commitment on brand equity. The results of this analysis along with the fit measures are given in Figure 5.3.

The models were compared based on decision tree frame work of Sequential Chi-square Difference Test (SCDT) (Anderson & Gerbing 1988), fit measures, Akaike Information Criterion (AIC) and Bayes Information Criterion (BIC).

The Chi-square (χ^2) –value with degrees of freedom (d.f) for the models were as follows: for M_s, χ^2 = 257.599, d.f = 144; for M_u, χ^2 = 258.839, d.f = 145; for M_t, χ^2 = 259.388, d.f = 146; for M_c, χ^2 = 286.844, d.f = 147; and for M_n, χ^2 = 4114.176, d.f = 171 with $p < 0.05$ for all. Following the decision tree procedure for SCDT, first the difference in χ^2 for M_t and Ms (denoted as $M_t – M_s$) was investigated. The

Unconstrained Model (M_u)
GFI = 0.910; AGFI = 0.882; NFI = 0.937; RFI = 0.926; CFI= 0.971; RMSEA = 0.054

Nested Model 1 (M_t)
GFI = 0.910; AGFI = 0.883; NFI = 0.937; RFI = 0.926; CFI= 0.971; RMSEA= 0.053

Nested Model 2 (M_c)
GFI = 0.901; AGFI = 0.872; NFI = 0.937; RFI = 0.919; CFI= 0.965; RMSEA= 0.059

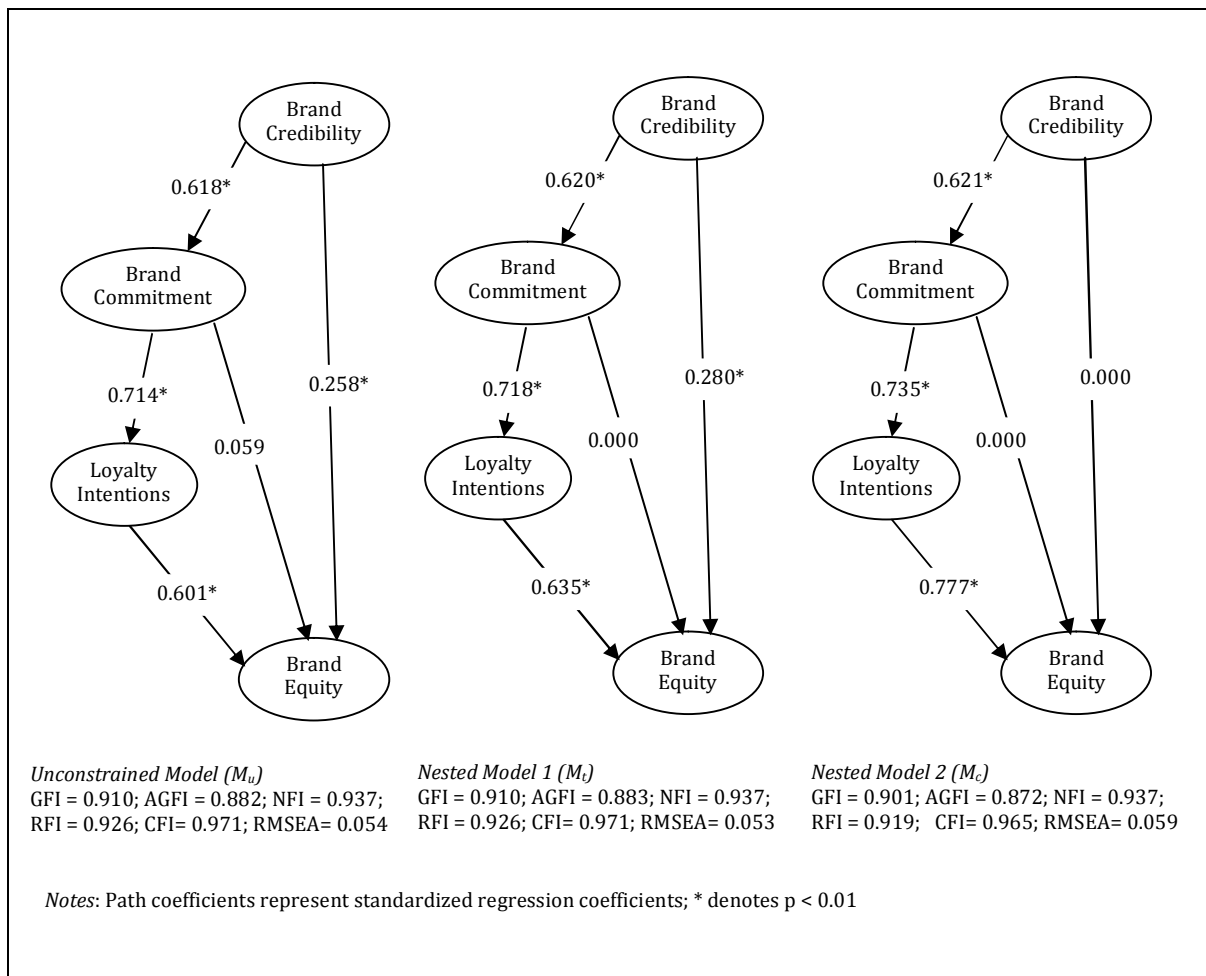*Notes*: Path coefficients represent standardized regression coefficients; * denotes $p < 0.01$

Figure 5.3. Model comparison: Path coefficients and fit measures

researchers found that $M_t - M_s = 1.789$ with p > 0.05 is not significant. Given this result, $M_c - M_t$ was evaluated in the next step, as per the procedure. The value for $M_c - M_t = 27.456$ with p < 0.05, is significant, rejecting the null hypothesis of no difference. This significant result shows that relaxing one or more of constraints in Mc would contribute to the explanation given. Thus $M_t - M_u$ comparison was done in the next step, following the procedure. The result, $M_t - M_u = 0.549$ with p > 0.05, showed the null hypothesis of no difference is accepted. This indicates that relaxing the constraint in Mt, commitment ⮕ equity, does not significantly add to the explanation of the construct covariance and parsimony. Hence the model Mt is accepted, as per the decision tree procedure of SCDT (Anderson & Gerbing 1988).

Further the models were compared with values of fit measures, AIC and BIC. The values of fit measures are statistically and theoretically valid for M_u, M_t and M_c (figure 5.3). Almost all fit measures were found to be approximately equal. AIC value for M_u, M_t and M_c models were 348.839, 347.388 and 372.841; while BIC value for models were 644.093, 636.081 and 654.976. Smaller values of AIC and BIC are preferred in model comparison (Hu & Bentler 1995; Ho 2006). The AIC and BIC values estimated were much smaller in case of M_t, supporting the results obtained from SCDT. Thus taking the results of SCDT procedure, fit measures, AIC and BIC, the model M_t was accepted, supporting full mediation of loyalty intention and partial mediation of credibility.

The regression path coefficients shown in Figure 5.3, for M_u, M_t and M_c, are standardized regression coefficients. In the accepted model M_t, path connecting commitment ⮕ brand equity was constrained to be equal to zero. All path coefficients which were freely estimated (β-values for H_1, H_2, H_4 and H_5 are 0.635, 0.718, 0.620 and 0.280 respectively) in the nested model, were found to be significant.

This shows that all the stated hypotheses were accepted, except H_3. The result proves a mediating role of loyalty intentions among the relationship between brand commitment and brand equity and also the direct and indirect effect of brand credibility on brand equity. Brand credibility has a direct effect on brand equity and an indirect effect through commitment and loyalty intentions. The direct effect of credibility on brand equity is 0.280 and indirect effect to be 0.283 (i.e. 0.620 x 0.718 x 0.635) and thus the total effect as 0.563 (0.283 + 0.280), showing the direct and indirect effects are approximately equal. The R^2 value for commitment is 0.385, while for loyalty intentions it is 0.515, and 0.641 for brand equity. This shows that the efforts taken by the marketers for improving the trustworthiness and expertise (belief) in turn develops directly the brand equity and indirectly improves the commitment (attitude). The commitment improved the likelihood of repeat purchase intentions which, in turn, resulted in brand equity.

6. DISCUSSION AND IMPLICATIONS

Through this study the researchers tried to explain the role of brand credibility and brand commitment in the formation of brand equity. The researchers identified that brand credibility has both direct and indirect effect in developing brand equity. The indirect effect is mediated through brand commitment. Brand commitment develops loyalty intentions and this in turn contributes to the development of brand equity. This shows that commitment and loyalty intentions partially mediate the relationship between credibility and brand equity. The direct effect and indirect effects are found to be approximately equal. The researchers have also checked the direct and indirect effect of commitment onto brand equity. The result showed that the direct effect is not significant, while there is a significant indirect effect through loyalty intentions. This implies that the effect of

brand commitment is fully mediated through loyalty intentions.

These findings have direct implications for managers who are responsible for communicating and maintaining relationship with their consumers. A firm tries to communicate the credibility of its products (brands) through the advertisement, price or warranty (Erdem & Swait 1998). These actions have a direct impact on brand equity as such. So communication strategies developed must enhance the credibility belief of consumers and the organisation should take sufficient efforts to improve its relationship with the consumers. A firm should take efforts to see to it that whatever it has promised must be there in the product. These conscious efforts taken by the organisation will be considered as credible and taken with a positive attitude which will enhance the development of loyalty intentions, which in turn develops brand equity in the long run.

A major limitation for our study could be that the researchers have taken only one product, so the scope of generalisability is limited to the product selected. The existence of common method variance might have inflated the estimated relationship of predictors.

7. CONCLUSION

The study has analysed how credibility enhances the formation of brand commitment, creates loyalty intentions in turn, leading to brand equity. We have also looked at the mediating role of loyalty intentions in its formation. The researchers observed that brand commitment and loyalty intentions act as mediators between brand credibility and loyalty intentions. The findings will help the marketers to devise strategies for the enhancement brand equity among consumers.

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