



A Study on Effect of Ingredient Technology Branding on Consumer Buying Behaviour for High Involvement and Low Involvement Products

Sudha Vemaraju

Assistant Professor, GITAM Hyderabad Business School,
GITAM University, Telangana, India.

(Corresponding author: Sudha Vemaraju)

(Received 11 January 2020, Revised 09 March 2020, Accepted 10 March 2020)

(Published by Research Trend, Website: www.researchtrend.net)

ABSTRACT: The study aimed to test the awareness of ITB, ingredient technology branding and host brand loyalty on consumers' buying behaviour with special focus on high involvement products (two-wheelers) and low involvement products (Packaged Food & Beverages). The data was collected through structured questionnaire by using convenience sampling technique from 250 customers in Allahabad, Uttar Pradesh. We examined the ITB on consumer buying behaviour, using 'Balance Theory Framework'. To prove this we used a valid regression model to test the predictors of consumer buying behaviour with respect to high involvement products (two-wheelers) and low involvement products (packaged food & beverages). T-test was used to test the significant differences of consumer's awareness on ITB and host brand loyalty for high involvement and low involvement products. Findings indicated that the impact of ingredient technology branding on consumer's purchase decision in case of high involvement products was high compared to low involvement products. Further, awareness on ITB was found to be a predictor of host brand loyalty and awareness on ITB influences consumer buying behaviour. One of the major challenges faced in this research was availability of adequate literature, as studies on impact of ingredient technology branding on consumer buying decisions in Indian context are very few. Further, the researcher could not come across any studies on impact of ingredient technology branding on consumer buying behaviour for high involvement and low involvement products like two wheelers and packaged foods and beverages. The study is unique in its own way and contributed to the existing literature of branding, consumer behaviour and technology as an ingredient. Hence the contribution of this study is interdisciplinary as it aids the host brand manufacturers, ingredient/component manufacturers and retailers to a great extent. The findings also indicated that the stronger the attitude toward the key technology ingredient, the more likely it is that this attitude will impact the host brands. Therefore, manufacturers (host brand & component) and retailers should focus on developing strategies to use and promote the benefits of ingredient technology branding effectively as it influences consumer buying behaviour.

Keywords: Ingredient Technology Branding, High Involvement Products, Low Involvement Products, Consumer Buying Behaviour.

I. INTRODUCTION

In today's VUCA (Volatile, Uncertain, Complex and Ambiguous) world where there is intense competition due to wide alternatives, emerging formats and more knowledgeable customers, sustainability became a major challenge to most of the companies. Ever since the massive success of the Intel Inside initiative, the power and potential of branding technology as an important ingredient has been well understood. Companies started using 'Ingredient Technology Branding' as a key marketing technique to differentiate from its competitors. Consumers in today's digital era became more knowledgeable and well-informed than ever before demanding quality ingredients in the products that he/she buys. To build company's reputation and project their technological excellence, firms are communicating – branding – this presence, what we term it as 'ingredient branding' [48]. Ingredient branding is a strategy where attribute ingredients are supplied by another firm [25]. Ingredient technology branding (ITB) highlights an underlying technology of a product and augments a brand name to that technology in order to lay emphasis on the quality and differentiated

value of the product. Many companies like Intel, Kent, Horlicks, Bajaj, Saffola, Pantene etc. have used technology as an ingredient and were successful in differentiating their products from their competitors. Branding technology thus became vital as it enables the companies to differentiate not only in B2B, but also in B2C markets. Today many companies are making use of their technologies in building their relationships with original equipment manufacturers. Past research studies found evidence that superior technology is vital for developing a brand and further stated that continuous technological leadership lead to attracting customers for building an ingredient brand [4]. Hence the benefit of branding technology as an important ingredient is articulated to the consumer in ways that can aid in higher propensity to buy.

Against this backdrop, companies adopted branding as a key competitive advantage to attract customers and influence their purchase decisions [1, 15, 24, 27, 28, 31, 32, 46]. Further researchers opined that ingredient branding strategy boosts brand awareness and overall image of the host brand leading to a positive brand evaluation [32]. Brand awareness, which includes awareness on ingredients used in product, further

influences consumer buying behaviour [12, 27]. Although many companies used ingredient branding to distinguish themselves from the competitors and break the clutter, but it is still unclear whether ingredient branding is influencing the consumers in a desired way or not. Past research studies [6, 11, 12], opined that the key drivers of ingredient branding strategy are vague and requires further research. The study have focussed on the hardly researched area, as researcher could not come across any past studies on impact of ingredient technology branding on consumer buying behaviour. Further there were no studies till date that compared high involvement and low involvement products like two wheelers and packaged foods & beverages with reference to ingredient technology branding. Therefore, this study would be necessary to fill this research gap and aid in gaining better insights on branding technology as an ingredient used in final products that have a profound impact on overall brand image and further influencing consumer buying behavior. Hence, our first research question: Do consumers' brand awareness on ingredient technology branding influence consumer buying behaviour?

Loyalty is one of the post- purchase behavior strategies adopted by companies for long term benefits. Loyal customers are deeply committed to repurchase and patronize their preferred products in the future, despite the situations and marketing activities that trigger the switching behavior of consumers [38]. The planned future behavior of consumer, belief, attitude, and value perception are related to the actual purchase of the product [5]. Past studies indicated that a firm with high brand orientation not only efficiently communicates to external parties, but also implements internal branding among their employees. Further internal branding leads to effective brand communication, enhanced customer service, thereby leading to positive brand association in the minds of target audience and finally results in enhancing brand equity [54]. Researchers also found evidence that consumers are willing to pay a price premium for branded ingredients [51]. Past research results also stated that positive influence of brand and label equity on transfer mechanisms and perceived brand fit further influences the product evaluation and consumer buying behaviour [21].

Hence our second research question: Do consumers' host brand loyalty influence consumer buying behaviour?

Ingredient technology branding augments key technology of one brand on to another brand [41].

Past research studies also indicated that brand awareness influences consumer buying behaviour [12]. The final product is nothing but the summation of all its ingredients. Ingredient technology branding, if implemented in a right way would be beneficial to the manufacturers of ingredients as well as the final products. Therefore our third research question: Do consumers' brand awareness on ingredient technology branding influence host brand loyalty? Hence the current study aimed to understand the awareness of ingredient technology branding and its impact on consumer buying behavior with respect to high involvement products (Two wheelers) and low involvement products (Packaged food & Beverages). There were many studies conducted on the Ingredient

branding in western context, but studies on impact of technology as a key ingredient on consumer buying decisions in Indian context are very few. Further the researcher could not come across any studies on impact of ingredient technology branding on consumer buying behavior with respect to high involvement and low involvement products. Hence our next research questions: Is consumers' awareness on ingredient technology branding and host brand loyalty high in high involvement products compared to low involvement products? In order to attain this the study assessed the actual impact of ingredient branding on the buying behavior of consumers, with special focus on high involvement products (Two-wheelers) and low involvement products (Packaged Food & Beverages).

In order to address the above research questions the current study aimed at testing the impact of awareness of ingredient technology for branding on consumer buying behavior and host brand loyalty. Further, the study also tried to compare the awareness of technology used in ingredient branding and host brand loyalty with respect to high involvement products (two wheelers) and low involvement products (packaged foods). To fulfill the current objectives the primary data that was collected with the help of structured questionnaire from 250 respondents from Allahabad, Uttar Pradesh, India. The collected data was analyzed using SPSS 20.0. Tools like t-test and regression analysis were used to analyze the data. The findings indicated that ingredient technology used for branding, if rightly used can benefit the host brand manufacturers, ingredient manufacturers, users and retailers to a great extent. Therefore, the companies should focus on developing strategies to create awareness on technology as an important value added differentiator and use branding this technology effectively. Further companies need to focus on building brand loyalty irrespective of a high involvement or a low involvement product.

This paper is organized into seven sections: The first section gives an introduction to ingredient technology used for branding high involvement and low involvement products. The second section covers the literature review on relationships between ingredient technology branding, host brand loyalty and consumer buying behavior. The third section gives the conceptual framework that discussed the balanced theory framework for ingredient technology branding. The fourth section discussed the methodology used for this study. Data analysis and findings were presented in the fifth and sixth section. The suggestions and conclusion were presented in the last section.

II. LITERATURE REVIEW

The literature review is organized into four sections:

- Awareness on Ingredient Technology Branding and Consumer Buying Behavior
- Ingredient Technology Branding and Host Brand Loyalty
- Host Brand Loyalty and Consumer Buying Behavior
- Ingredient Technology Branding and Host Brand Loyalty for High Involvement and Low Involvement Products

Awareness on Ingredient Technology Branding and Consumer Buying Behavior: The theory of brand

knowledge was conceptualized and a framework was developed and used as a guideline in the context of brand awareness and brand image [28].

Brand knowledge influence consumer's buying intentions, and also measures the effects of knowledge on key technology ingredient and how that strategy can be utilized in another environment [15]. Brand awareness is defined as the strength and recognition which customer has towards the brand [2, 15, 28, 52]. Further they opined that, if consumers have adequate brand awareness it would also influence consumer buying behavior. Brand awareness is divided into two sub-components: brand recognition and brand recall. Researchers [10] found evidence that promoting ingredient technology branding positively impacts the attitude and purchase intentions of consumers towards host brands. Findings imply that the key technology ingredient used in developing products can help marketers to stimulate derived demand in the sense that it makes consumer brands incorporating the advertised industrial product more attractive to consumers. Higher the emphasis on technology ingredient promotion, greater would be the impact on host brand and thereby influence consumer buying behavior. Hence researchers opined that there would be a significant increase in brand awareness when key technology ingredient branding was introduced.

Further, technology as an important ingredient component can to increase brand recognition, enhance brand image in terms of quality and differentiate a product from other brands [13, 37]. Further researchers concluded that brand awareness influences consumer buying behaviour [12, 27].

Hence our first hypothesis:

H1: There is positive relationship between consumers' awareness on ingredient technology branding and their buying intentions.

Host Brand Loyalty and Consumer Buying Behavior: Brand loyalty is a psychological process and may be defined as a behavioral response articulated with reference to one or more alternative brands out of a set of brands [19]. Consumer's brand loyalty intention has a strong impact on share-of-visit [18]. Researchers [53] viewed from two dimensions: attitudinal and behavioral. Loyalty from attitudinal dimension may be viewed as the overall customer perception related to the brand while the behavioral dimension represents the consumer's repurchase intentions and recommending the brand to others. Loyal customers are deeply committed to repurchase and patronize their preferred products in the future, despite the situations and marketing activities that trigger the switching behavior of consumers [38]. Consumer attitudes have been divided into four phases: cognitive loyalty, affective loyalty, conative loyalty and action loyalty [39]. Consumers' evaluation related to the performance of a brand with respect to its attributes is termed as conative phase. After the conative phase, the customers tend to develop an affective attitude. Consumers develop liking towards the brand if he gets satisfied, that further leads to commitment stage to repurchase the same brand again (conative). In the later stage consumer's exhibits loyalty (action) that it defines behavior.

Brand loyalty as the positive attitude of consumers' towards a brand that lead to loving the brand and may

result in a feeling of association with other customers that use the brand [29]. Purchase intention is defined as the probability of consumer buying the product or service which would undergo changes in consumer psychology [49]. Researchers suggest that the perceived trust of the host brand also increased with the inclusion of the ingredient brand [50]. Past research studies found evidence that brand awareness, brand loyalty, image of the ingredient positively influences consumer buying behaviour [3, 12, 27].

Hence our second hypothesis:

H2: Host brand loyalty positively influences consumer buying behaviour.

Ingredient Technology Branding and Host Brand Loyalty: Researchers [47] opined that by augmenting the key ingredients like technology within a product, the brand would thus positively get benefited which is termed as the "spill over effect". Further they also found that ingredient brand has not only the potential to modify host brand attributes but also redesign the brand. Ingredient technology branding aids the host brand in strengthening its market reputation and original equipment manufacturer (OEM) by creating difficulties for the competitors to enter a market. The firms use ITB as a key strategy to promote the technology used to develop a product or a service and to positively influence host brand [32, 37]. Further researchers [23, 52] found evidence that ITB if used rightly can contribute positively to the host brand loyalty. The unknown host brands may also get benefited by using ITB in a service environment [14].

Past studies [35, 37, 43] also supplemented the positive impact of ingredient branding on influencing host brand loyalty by quoting the examples of Du pont, Boeing (host brand) has an ingredient branding relationship with GE (technology ingredient component). Overall brand image positively influences brand loyalty in B2B context, both in case of goods and services [8, 30]. Further studies suggests that consumer's attitude towards the brands in co-branded endeavour's would be based on consumer's perceptual brand fit between the ingredient and host brand in regards to the transference of information between them [9]. Hence from the past studies it is clear that a strong technology ingredient branding if used rightly influence consumer decision making process and further positively influences both the ingredient supplier and the host brands. Further ingredient technology branding aids in the success of host brands. In this vein, researchers [32, 40] stated that ingredient manufacturers are dealing with the final consumers to extend their support to host brand manufacturers in making their brands successful in product and service contexts. Further perceived trust of the host brand boosts with the inclusion of the ingredient brand [50].

Hence our third hypothesis:

H3: There is positive relationship between consumers' awareness on ingredient technology branding and host brand loyalty.

Ingredient Technology Branding and Host Brand Loyalty for High Involvement and Low Involvement Products:

High Involvement Products: High-involvement products are expensive, risky and not purchased frequently. Hence customer involvement and evaluation

is high in high involvement products [20]. Eg: Cars, Jewelry, Bikes etc.

Low Involvement Products: Low involvement products are inexpensive, frequently purchased and involve low risk to the customer.

Customer involvement is also very low as they are inexpensive and frequently bought. Impulse buying behavior of consumer's is high in case of low involvement products compared to high-involvement products [20]. Eg: Milk, bread, soft drinks etc.

Ingredient Technology Branding (ITB) is a branding strategy related to a component or a technology as a key ingredient that is included in a host brand and has its own brand identity [22, 32, 33]. For instance, a company might sell water purifiers or bikes, and their brand might not be that familiar. By branding their technology ingredients like RO, RTR and LoSorb Technology brands like KENT, TVS APACHE and SAFFOLA were successful in positively influencing consumer buying behavior in the context of high involvement and low involvement products. Hence ingredient technology branding may be viewed as one of the co-branding strategy, wherein one brand is a B2B ingredient and the other is a host brand [14, 42, 45]. Past studies also found evidence that consumers' brand awareness is high in high-involvement products compared to low-involvement products [44].

Hence our fourth and fifth hypotheses:

H4: Consumers' awareness on ingredient technology branding is high in high involvement products than low involvement products.

H5: Host brand Loyalty is high in high involvement products compared to low involvement products.

III. CONCEPTUAL LINKS BETWEEN BALANCE THEORY FRAMEWORK AND INGREDIENT BRANDING

The Balance Theory framework and its components were developed by past researchers [7, 16, 17, 34, 36]. We used balance theory here to study the basic consumer psychology related to ingredient branding for a relation that has positive signs.

The Balance Theory proposed by Heider's, states that the relations between two individuals have a propensity to attain a homeostatic state of symmetry or balance, when the relations amongst them are the same, either both positive (+) or both negative (-). Heider developed the concept of a pox triple where p is the central person, o is an actor and x an object (which may be a third person).

Fig. 1, illustrates the pox triple developed by Heider in the context of ingredient technology branding. Thus, if P and O like each other (sentiment relation = +), if O and X like each other (sentiment relation = +), and if P and X like each other (sentiment relation = +), then their relationships are set to be balanced: + * + * + = +. In the same vein we used the concept of balance theory in the context of ITB. When consumers have more awareness on key technology ingredient of the brand (O), then they will have positive attitude toward the host brands (P).

The stronger the attitude toward the key technology ingredient, the more likely it is that this attitude will

impact the host brands. Further when host brand loyalty (P) positively influences consumer buying behavior(X), then awareness on ingredient branding also positively influences consumer buying behavior. Three positive relationships result in balanced state.

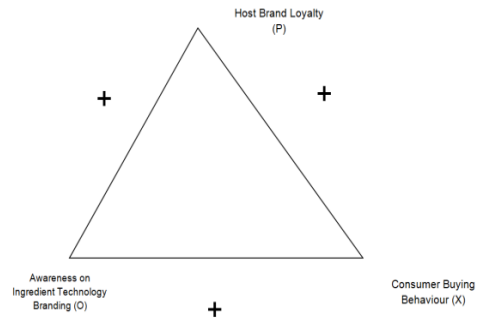


Fig. 1. Balance Theory Framework for Ingredient Technology Branding and Consumer Buying Behaviour.

IV. METHOD

Ingredient technology branding has benefited many companies in case of high involvement as well as low involvement products. In order to comprehend this concept to a larger extent and derive its benefits it is necessary to gain better insights in detail. Therefore, the current study aimed at understanding the concept and applicability of ITB in depth. The study assessed the actual impact of ingredient branding on consumer buying behavior with special emphasis on high involvement products (two-wheelers) and low involvement products (packaged food & beverages).

In order to attain the study objectives, a structured questionnaire was developed. Data collection was done using survey method from 250 respondents using convenience sampling technique from Allahabad during March, 2018.

The questionnaire comprised of three sections: The first section includes the demographic variables, the second section includes the questions on consumer awareness on ingredient technology branding and the third section consists of impact of ingredient technology branding on consumer buying behavior. Data analysis was done using SPSS 20.0 software.

Regression model was developed for analyzing the balanced theory framework for predicting the relationship between ingredient technology branding, host brand loyalty and consumer buying behavior.

T-test was used to test the significant differences of consumer's awareness on ingredient technology branding and host brand loyalty for high involvement and low involvement products.

Sample Characteristics: From Table 1, we can find majority of the sampled respondents who participated in this survey were female (52%), young people from the age group of 18-15 years (81%) with monthly income of INR 25000-Above 35000 (43%). Dominant segment of the sampled respondents were students (79%) and business people (12%), educated with post graduation (41%) and graduation degrees (50%).

Table 1: Sample Characteristics.

Demographic Profile	Description	Percent
Age(in years)	Below 18	5
	18-25	81
	26-35	8
	36-50	6
Gender	Male	48
	Female	52
Monthly Income (in INR)	Less than 5000	29
	5000-15000	14
	15000-25000	14
	25000-35000	8.0
Occupation	Above 35000	35
	Service	5
	Business	12
	Student	79
Education	Others	4
	Graduation	9
	Post-Graduation	41
	Degree/Diploma	50

N=250

Scale Validity and Reliability: The reliability of each construct was first measured with Cronbach's alpha. A construct is reliable if it has an alpha value greater than 0.6. The Cronbach's alpha (α) for all the constructs are greater 0.6, as depicted in Table 2. Thus, all constructs in the research model are considered reliable.

The Cronbach's alpha for awareness, host brand loyalty, impact on buying behaviour for high involvement product were 0.774, 0.647, 0.625 respectively. The Cronbach's alpha for awareness, host brand loyalty, impact on buying behavior for low involvement product were 0.732, 0.639, 0.751 respectively.

V. DATA ANALYSIS

For the formulated hypotheses, we present the data analysis in this section. To test the first, second and third hypotheses we used regressions analysis. To test

the fourth and fifth hypotheses we used T-test to examine the significant differences between awareness on ingredient branding, host brand loyalty and consumer buying behaviour.

Regression Analysis for Consumer Buying Behaviour: The result of regression analysis based on two independent factors i.e. Awareness on Ingredient branding and Host Brand Loyalty($R=0.813$) statistically significant relationship ($P 0.000 < 0.05$) with dependent variable Impact on Buying Behaviour. 81% (Adjusted $R^2 = 0.661$) variance of dependent variable could be predicted through independent variable. It means awareness on ingredient branding and host brand loyalty predicts consumer buying behaviour. The value of R and adjusted R square is close that indicates to proper model fit (Table 3).

Table 2: Cronbach's Alpha for High Involvement and Low Involvement Products.

Variables	Description	2-Wheelers (High involvement product)	Packaged food (Low involvement product)
Awareness on ingredient Technology branding	I know about the additional features, technology present in the products I purchase (like. mileage, cc).	0.774	0.732
	I am aware about the importance of benefits of the technology as ingredients (Losorb technology, RTR, DTSI) in the products I have purchased.		
	I get to know about the technology ingredients (like Losorb technology, RTR, DTSI) of the products through its packaging/brochure provided		
	Advertisement help me to understand the ingredients used in the products.		
	Sales personnel help me to understand the ingredients used in the products.		
Host Brand Loyalty	I am ready to pay additional price for an additional feature or ingredient in the products I purchase.	0.647	0.639
	I perceive the quality of the product based on the ingredients used.		
	I stick to my favourite brand even if it does not introduce any new ingredient or features.		
	If the ingredients imbibed in a product are reliable, then I perceive the main product also to be reliable.		
	I do not look much for the features/ingredients used when buying a product of a reliable brand (for e.g. a bike from Hero, Honda etc).		
Impact on Buying Behaviour	I purchase the products only after comparing the ingredients. (like. mileage, cc)	0.625	0.751
	I prefer to consider the ingredients of a product, if it provides additional benefits (like free maintenance for first few months, warrantee, easy return/exchange policy)		
	Ingredient technology branding increases the repeat purchases.		
	Ingredient technology branding influences my purchase decision.		
	Ingredient technology branding helps in choosing the product from various options.		

Table 3: Model Summary of Multiple Regression Analysis for Consumer Buying Behaviour.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.813a	0.661	0.658	0.309	1.659

Table 4: ANOVA for Consumer Buying Behaviour.

Model	Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	45.971	2	22.985	240.513	0.000 ^b
	Residual	23.605	247	0.096		
	Total	69.576	249			

a. Dependent Variable: Consumer Buying Behaviour

b. Predictors: (Constant), Awareness on Ingredient Branding, Host Brand Loyalty

The ANOVA table tests the acceptability of the model from a statistical perspective. In the above table the value of F is 240.513 and significance is 0.000 which is less than 0.05 means awareness on ingredient branding and host brand loyalty influences consumer buying behaviour (Table 4).

The Value of (B=0.369, t=9.808) for awareness on ingredient branding and (B=0.428, t=10.236) for host brand loyalty are significant at 5% significance level (0.000) which is less than 0.005. Hence it can be inferred that awareness on ingredient branding and host brand loyalty positively influences consumer buying behaviour. Variance Inflation Factor (VIF) test helps to see if the data met the assumptions of collinearity indicated that multicollinearity was not a concern for host brand loyalty and awareness on ingredient branding (Tolerance = 0.661, VIF = 1.513) (Table 5).

Hence we accept our first and second hypotheses that: There is positive relationship between consumers' awareness on ingredient branding and their buying

intentions. Further, host brand loyalty influences consumer buying behaviour.

Regression Analysis for Host Brand Loyalty: We used a regression model to predict the impact of awareness on ingredient branding on host brand loyalty. The result of regression analysis based on one independent factor i.e. Awareness on Ingredient branding (R=0.582) statistically significant relationship (P 0.000< 0.05) with dependent variable Host Brand Loyalty. 58% (Adjusted R²= 0.336) variance of dependent variable could be predicted through independent variable. It means awareness on Ingredient branding is the predictor of host brand loyalty. The value of R and adjusted R square is close that indicates to proper model fit (Table 6).

The ANOVA table tests the acceptability of the model from a statistical perspective. In the above table the value of F is 127.248 and significance is .000 which is less than 0.05 means awareness on ingredient branding influences host brand loyalty (Table 7).

Table 5: Coefficients for Consumer Buying Behaviour.

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0.868	0.137		6.347	0.000		
	Host Brand Loyalty	0.428	0.042	0.467	10.236	0.000	0.661	1.513
	Awareness on ITB	0.369	0.038	0.447	9.808	0.000	0.661	1.513

a. Dependent Variable: Consumer Buying Behaviour

Table 6: Model Summary for Host Brand Loyalty.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.582 ^a	0.339	0.336	0.469	2.249

a. Predictors: (Constant), Awareness on ITB

b. Dependent Variable: Host Brand Loyalty

Table 7: ANOVA for Host Brand Loyalty.

Model	Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	28.040	1	28.040	127.248	0.000 ^b
	Residual	54.648	248	0.220		
	Total	82.687	249			

a. Dependent Variable: Host Brand Loyalty,

b. Predictors: (Constant), Awareness on IB

The Value of (B=0.523, t=11.280) for awareness on ingredient branding is significant at 5% significance level (0.000) which is less than .005. Hence it can be inferred that awareness on ingredient branding positively influences host brand loyalty. Variance Inflation Factor

(VIF) test helps to see if the data met the assumptions of collinearity indicated that multicollinearity was not a concern for awareness on ingredient branding (Tolerance = 1.00, VIF = 1.000) from Table 8. Hence we accept our third hypothesis that: awareness on ingredient branding influences host brand loyalty.

Table 8: Coefficients for Host Brand Loyalty.

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.562	0.182		8.565	0.000		
	Awareness on ITB	0.523	0.046	0.582	11.280	0.000	1.000	1.000

a. Dependent Variable: Host Brand Loyalty

T-TEST for Awareness on Ingredient Branding and Host Brand Loyalty:

In order to test the fourth and fifth hypotheses, we used T-test. T-test was used to compare the awareness levels of Ingredient Branding and host brand loyalty in 2-Wheelers (High involvement product) and Packaged food (Low involvement product). A paired-sample t-test was conducted to compare awareness on ingredient branding and host brand loyalty in 2-wheelers (High Involvement Product) and packaged food (Low Involvement Product).

The results indicate that there was a significant difference in the scores for 2-wheelers (M=38.84, SD=7.402) and Packaged food product (M=38.04, SD = 6.616) with $t(250) = 3.946, (p=0.051)$. The consumer awareness on ingredient branding of 2-Wheeler (High involvement product) is more as compared to Packaged Food (Low involvement product).

In case of host brand loyalty, we found that There is no significant difference in the scores for 2-wheelers (M=36.20, SD=6.756) and Packaged food product (M=36.12, SD= 5.29), $t(250)=0.27, (p=0.893)$ from Table 9.

Hence, it can be inferred that host brand loyalty does not differ much in case of high involvement and low involvement products. But when awareness on ingredients is high in case of high involvement compared to low involvement products.

The summary of hypotheses is depicted in Table 10. The results of our first hypothesis that there positive relationship between consumers' awareness on ingredient branding and their buying intentions is supported by past studies [2, 15, 28, 52]. Our second finding, host brand loyalty positively influences consumer buying are in sync with past studies [3, 29, 39]. The current study finding that ingredient branding positively influencing host brand loyalty supplements the past studies [35, 37, 43]. We found evidence that consumers' brand awareness is high in high-involvement products compared to low-involvement products that complements the findings of past research studies [44]. Finally the study also found that there is no significant difference between host brand loyalty in case of high involvement and low involvement products which is inconsistent with past studies.

Table 9: Paired Sample Statistics for Awareness on Ingredient Branding and Host Brand Loyalty.

	Mean	Std. Deviation	Std. Error Mean
Awareness on IB(HI)	38.84	7.402	0.662
Awareness on IB(LI)	38.04	6.616	0.592
Host brand loyalty (HI)	36.20	6.756	0.604
Host brand loyalty (LI)	36.12	5.29	0.474

Table 10: Summary of Hypotheses.

S.No.	Hypothesis	Result
H1	There is positive relationship between consumers' awareness on ingredient branding and their buying intentions.	ACCEPTED
H2	Host Brand Loyalty positively influences consumer buying behaviour	ACCEPTED
H3	There is positive relationship between consumers' awareness on ingredient branding and host brand loyalty.	ACCEPTED
H4	Consumers' awareness on ingredient branding is high in high involvement products than low involvement products.	ACCEPTED
H5	Host brand Loyalty is high in high involvement products compared to low involvement products.	REJECTED

VI. DISCUSSION

The purpose of this study was to test the impact of ingredient branding technology on consumer buying behaviour and host brand loyalty. Further the study also compared the awareness on ingredient brand technology and host brand loyalty with respect to high involvement (two wheelers) and low involvement (packaged foods). Findings revealed that awareness on ingredient branding technology and host brand loyalty positively influenced consumer buying behaviour. This research finding is supported by past studies [3, 12, 27]. Further, awareness on ingredient technology used in branding positively influenced host brand loyalty. This finding is in line with past studies [35, 37, 43]. Consumers' awareness on ingredient technology used in branding is high in high involvement products compared to low involvement products.

Surprisingly, host brand loyalty does not differ in case of high involvement or low involvement products. This implies that, the brand loyalty remain the same, irrespective of a soft drink, bread, cars, and bikes etc. The results of the research suggests that as ingredient technology is more emphasized by customers for building host brand loyalty, hence manufacturers of the host product must take the advantage of the ingredient brand's marketing efforts for better brand building. As ingredient technology branding is positively influencing the host brand loyalty as well as consumer buying behaviour, both ingredient manufacturers, host brand manufacturers, retailers and ingredient users may work together to get benefitted out of this synergetic process. It is also clear from the results that creating awareness on ingredient technology used in host brands need to be advertised to strengthen the

ingredient component, which in turn also makes stronger the host brand and further builds consumer loyalty. The findings also suggest that building brand loyalty is the key for brand success whether it may be a high involvement product or a low involvement product.

VII. CONCLUSION

This study is unique in its own way as studies on impact of ingredient technology used for branding on consumer buying decisions in Indian context are very few. Further the researcher could not come across any studies on impact of ingredient branding on consumer buying behaviour with respect to high involvement and low involvement products specific to products like two wheelers and packaged foods. Given the increase of consumers' health consciousness with respect to food items and traffic congestion prevailing in cities wherein customers preference towards two wheelers this study would aid ingredient component manufacturers, host brand manufacturers and retailers in redesigning their branding strategies.

VIII. FUTURE SCOPE

Findings from this study cannot be generalized as it is appropriate to conduct such studies across other product categories, and other geographies taking large sample size to be more accurate. Secondly the results may vary with geography, B2B context with respect to other products categories and services. Despite these limitations, this study demonstrates deep understanding on ingredient technology branding. We used balance theory to understand the relationship amongst the study variables. Descriptive and inferential statistics was used to analyze the data and draw conclusions. Further researchers may consider other product categories, taking large sample size and include other variables like psychographic factors, personal factors in B2B context for products and services etc. for better results.

ACKNOWLEDGEMENTS

The author would like to thank the respondents for providing the data.

Conflict of Interest. The Author declares that there is no conflict of interest.

REFERENCES

- [1]. Aaker, D. (2003). The power of the branded differentiator. *MIT Sloan Management Review*, 45(1), 83-87.
- [2]. Aaker, D. A. (1996a). Measuring Brand Equity Across Products and Markets. *California Management Review*, 38(3), 102-120.
- [3]. Aghazadeh, H., Aghamiri, E., & Shahram, F. (2017). The effect of industrial brand equity on ingredient brand equity Component and end-user Purchase Intention. *Iranian Business Management*, 8(4), 699-720.
- [4]. Altshuler, L., & Tarnovskaya, V. V. (2010). Branding capability of technology born globals. *Journal of Brand Management*, 18(3), 212-227.
- [5]. Anderson, J. C., & Narus, J. A. (1998). Business marketing: understand what customers value. *Harvard business review*, 76(6), 53-67.
- [6]. Besharat, A. (2010). How co-branding versus brand extensions drive consumers' evaluations of new

- products: a brand equity approach. *Industrial Marketing Management*, 39(8), 1240-1249.
- [7]. Cartwright, D., & Harary, F. (1956). Structural balance: a generalization of Heider's theory. *Psychological review*, 63(5), 277-293.
- [8]. Cassia, F., Cobelli, N., & Ugolini, M. (2017). The effects of goods-related and service-related B2B brand images on customer loyalty. *Journal of Business & Industrial Marketing*, 32(5), 722-732.
- [9]. Charry, K., & Demoulin, N. T. M. (2014). Children's response to co-branded products: The facilitating role of fit. *International Journal of Retail & Distribution Management*, 42(11), 1032-1052.
- [10]. Giakoumaki, C., Avlonitis, G. J., & Baltas, G. (2016). Does ingredient advertising work? Some evidence on its impact. *Journal of Business & Industrial Marketing*, 31(7), 901-913
- [11]. Costa, A. I. A., & Jongen, W. M. F. (2006). New insights into consumer-led food product development", *Trends in Food Science & Technology*, 17(8), 457-465.
- [12]. Dabbous, A., & Barakat, K. A. (2020). Bridging the online offline gap: Assessing the impact of brands' social network content quality on brand awareness and purchase intention. *Journal of Retailing and Consumer Services*, 53(1), 101966.
- [13]. Desai, K. K., & Keller, K. L. (2002). The effects of ingredient branding strategies on host brand extendibility. *Journal of marketing*, 66(1), 73-93.
- [14]. Erevelles, S., Stevenson, T. H., Srinivasan, S., & Fukawa, N. (2008). An analysis of B2B ingredient co-branding relationships. *Industrial Marketing Management*, 37(8), 940-952.
- [15]. Esch, F. R., Langner, T., Schmitt, B. H. & Geus, P. (2006). Are brands forever? How brand knowledge and relationships affect current and future purchases. *Journal of Product & Brand Management*, 15(2), 98-105.
- [16]. Heider F (1958) The psychology of interpersonal relations. New York: John Wiley & Sons.
- [17]. Heider, F. (1946). Attitudes and cognitive organization. *The Journal of psychology*, 21(1), 107-112.
- [18]. Hwang, E., Baloglu, S., & Tanford, S. (2019). Building loyalty through reward programs: the influence of perceptions of fairness and brand attachment. *International Journal of Hospitality Management*, 76(Part A), 19-28.
- [19]. Jacoby, J., & Kyner, D. B. (1973). Brand loyalty vs. repeat purchasing behavior. *Journal of Marketing research*, 10(1), 1-9.
- [20]. Jain, M. (2019). A study on consumer behavior-decision making under high and low involvement situations. *IJRAR-International Journal of Research and Analytical Reviews*, 6(1), 943-947.
- [21]. Jongmans, E., Dampérat, M., Jeannot, F., Lei, P., & Jolibert, A. (2019). What is the added value of an organic label? Proposition of a model of transfer from the perspective of ingredient branding. *Journal of Marketing Management*, 35(3-4), 338-363.
- [22]. Kalafatis, S. P., Remizova, N., Riley, D., & Singh, J. (2012). The differential impact of brand equity on B2B co-branding. *Journal of Business & Industrial Marketing*, 27(8), 623, 634.
- [23]. Kamins, M. A. & Marks, L. J. (1991). The perception of kosher as a third party certification claim in advertising for familiar and unfamiliar Brands. *Journal of the Academy of Marketing Science*, 19(3), 177-186.

- [24]. Kapferer, J. N. (2015). Kapferer on luxury: How luxury brands can grow yet remain rare. Kogan Page Publishers.
- [25]. Kaushik, K., & Keller, K. (2002). The Effects of Ingredient Branding Strategies on Host Brand Extendibility. *The Journal of Marketing*, 66(1), 73-93.
- [26]. Keller, K. L. (2016). Reflections on customer-based brand equity: perspectives, progress, and priorities. *AMS review*, 6(1-2), 1-16.
- [27]. Keller, K. L. (2020). Leveraging secondary associations to build brand equity: Theoretical perspectives and practical applications. *International Journal of Advertising*, 39(1), 1-18.
- [28]. Keller, K. L. (1993). Conceptualizing, Measuring, and Managing Customer-Based Brand Equity. *Journal of Marketing*, 57(1), 1-22.
- [29]. Keller, K. L. (2003b), *Strategic Brand Management: Building, Measuring, and Managing Brand Equity*, 2nd ed., Pearson Education, Harlow: 351.
- [30]. Keränen, J., Piirainen, K. A., & Salminen, R. T. (2012). Systematic review on B2B branding: research issues and avenues for future research. *Journal of Product & Brand Management*, 21(6), 404-417.
- [31]. Kotler, P. & Pfoertsch, W. (2007). Being known or being one of many; the need for brand management for business-to-business (B2B) companies. *Journal of Business & Marketing*, 22(6), 357-362.
- [32]. Kotler, P., & Pfoertsch, W. (2010). *Ingredient branding: making the invisible visible*. Springer Science & Business Media.
- [33]. Levin, Irwin P., & Levin, Aron M. (2000). Modelling the Role of Brand Alliances in the Assimilation of Product Evaluations. *Journal of Consumer Psychology*, 9(1), 43-52.
- [34]. Lewin, K. (1951). Field theory in social science.
- [35]. McCarthy, M. S., & Norris, D. G. (1999). Improving competitive position using branded ingredients. *Journal of Product & Brand Management*, 8(4), 267-285.
- [36]. Newcomb, T. M. (1961). *The acquaintance process*. New York, NY, US.
- [37]. Norris, D.G. (1992). Ingredient branding: a strategy option with multiple beneficiaries. *Journal of Consumer Marketing*, 9(3), 19-31.
- [38]. Oliver, R. L. (1997). Emotional expression in the satisfaction response. *Satisfaction: A behavioral perspective on the consumer*, 291-325.
- [39]. Oliver, R. L. (1999). Whence consumer loyalty? *Journal of marketing*, 63(4_supl1), 33-44.
- [40]. Panwar, T., & Khan, K. (2019). Ingredient Branding as a Branding Strategy for News Channels in India. *International Journal of Business Insights & Transformation*, 12(2), 8-15.
- [41]. Ponnampalani, A., & Balaji, M. S. (2015). Investigating the effects of product innovation and ingredient branding strategies on brand equity of food products. *British Food Journal*, 117(2), 523-537.
- [42]. Prince, M., & Davies, M. (2002). Co-branding partners: What do they see in each other? *Business Horizons*, 45(5), 51-55.
- [43]. Pyke, D. F. (1998). Strategies for global sourcing. *Financial Times*, 20, 2-4.
- [44]. Radder, L., & Huang, W. (2008). High-involvement and low-involvement products: A comparison of brand awareness among students at a South African university. *Journal of Fashion Marketing and Management: An International Journal*, 12(2), 232-243.
- [45]. Rao, A. R., Qu, L., & Ruekert, R. W. (1999). Signaling unobservable product quality through a brand ally. *Journal of Marketing Research*, 36(2), 258-268.
- [46]. Rid, J., & Pfoertsch, W. (2013). Ingredient Branding of Industrial Goods: A Case Study of Two Distinct Automotive Suppliers. *IUP Journal of Brand Management*, 10(4), 49-65.
- [47]. Simonin, B. L., & Ruth, J. A. (1998). Is a company known by the company it keeps? Assessing the spillover effects of brand alliances on consumer brand attitudes. *Journal of marketing research*, 35(1), 30-42.
- [48]. Smit, M. (1999). Ingredient branding. In *Co-Branding* (pp. 66-83). Palgrave Macmillan, London.
- [49]. Song, Y., Guo, S., & Zhang, M. (2019). Assessing customers' perceived value of the anti-haze cosmetics under haze pollution. *Science of The Total Environment*, 685, 753-762.
- [50]. Tiwari, B. K., & Singh, N. (2012). *Pulse chemistry and technology*. Royal Society of Chemistry.
- [51]. Vaz, P. R. (2019). Ingredient branding influence on purchase intention and willingness to pay: the smartphone case in Portugal (Doctoral dissertation).
- [52]. Wang, X. & Yang, Z. (2010). The Effect of Brand Credibility on Consumers' Brand Purchase Intention in Emerging Economies: The Moderating Role of Brand Awareness and Brand Image. *Journal of Global Marketing*, 23(3), 177-188.
- [53]. Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal of marketing*, 60(2), 31-46.
- [54]. Zhang, J., Jiang, Y., Shabbir, R., & Zhu, M. (2016). How brand orientation impacts B2B service brand equity? An empirical study among Chinese firms. *Journal of Business & Industrial Marketing*, 31(1), 83-98.

How to cite this article: Vemaraju, Sudha (2020). A Study on Effect of Ingredient Technology Branding on Consumer Buying Behaviour for High Involvement and Low Involvement Products. *International Journal on Emerging Technologies*, 11(2): 722-730.