

Impact of Brand association on consumer buying behaviour on ceramic tile brands

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Abstract : This study empirically examines the relationship between Brand association as the independent variable and ceramic tile brands as the dependent variable. In order to achieve the goal of this study, primary data is used which is collected through 504 questionnaires in the market of Tirupati. While one-way ANOVA is used to explain the significant relationship between these two variables, Chi-square explains the association between these two variables and t-test is used to explain the acceptance of ceramic tiles by male and female respondents. The result of the study reveals the existence of positive relationship between the brand association dimensions on the consumer buying behaviour. The brand association functions are the guarantee, social identification, personal identification and status that have positive impact on the recommendation, extension of purchase of same brand even at premium price.

Keywords: Brand image, Brand equity, Brand, Brand association, Consumer response.

1. INTRODUCTION

Today ceramic tiles have become an integral part of home improvement. It makes a huge difference to the way interiors and exteriors look and express. The Indian tile industry continues to grow at a healthy of 15% per annum. The overall size of the Indian ceramic tile industry is approximately Rs 35,000 crores (FY24). The organized sector comprises of 14 players approximately. While the unorganized sector accounts for nearly 60% of the total industry. In terms of ceramic tiles production, India ranks 3 in the world and the per capita consumption in India is at 0.80 square meters per person where as it is 3 square meters in China, Brazil and Malaysia.

Ceramic tiles are primarily hygiene products. This is fairly evident from their varied usage from bathrooms and kitchens in Indian households to medical centres, labs, milk booths, schools, and public conveniences. The main product segments are the wall tile, floor tile, vitrified tile and industrial tile with market shares of (in value terms) 20%, 23% 50%, and 7% respectively. The tiles are available in a wide variety of designs, textures and surface effects. The present study discusses about customer's buying behaviour in purchase of branded ceramic tiles.

Brand associations is everything associated in memory with a brand (Aaker and Equity 1991). Brand associations become a key to competitive advantage by differentiating their product form other counter products in market. Brand association involves product features and benefits to become a consumer want and reasons for buying and consume the brand. According to Keller brand association is categorized in to three main categories attitudes, benefits, attributes. Brand equity and the brand association are intensely connected with each other. Brand association can be used as information collecting tool (Van Osselaer and Janiszewski 2001), and hence act as leverage to boost the brand equity (James, 2005).

2. Literature review:

Brand associations can be classified into three major types of increasing scope: 1) Attributes 2) Benefits, and 3) Attitude.

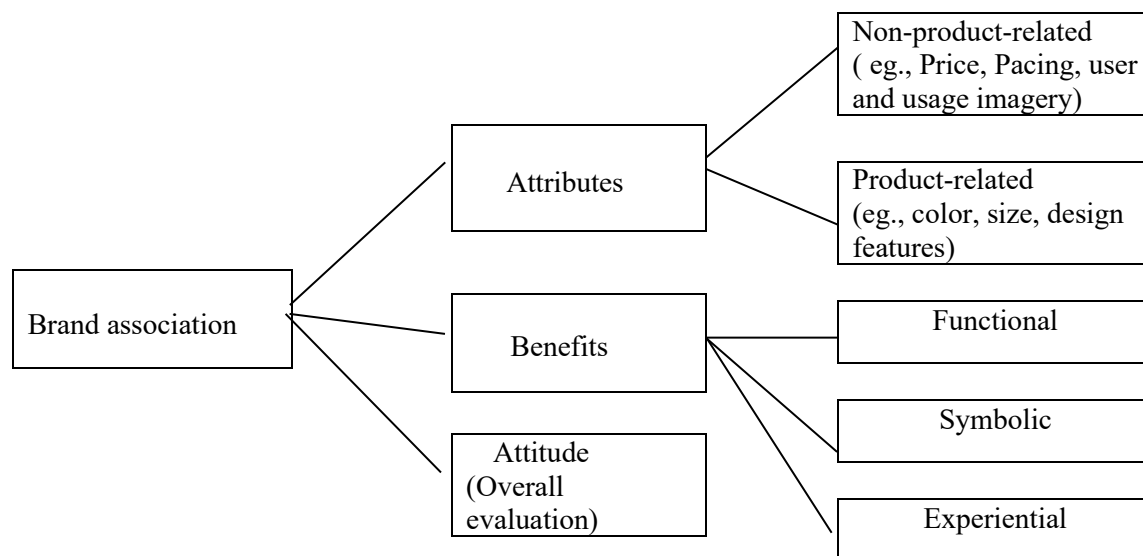


Fig 1: Types of brand association

(Keller and Aaker, 1992) advocates that, this leads us to propose the following: the closer the association of the brand with the guarantee function, the greater the acceptance of the brand extension.

Krishnan (1996) considered that “Brand association” can be used as a general term to represent a link between two nodes, which suggest brand association in customer’s mind”.

According to Hutton (1997), the recommendation of the brand to others usually entails great uncertainty for the consumer, even greater than that when buying the brand for himself. Therefore, it is to be expected that the consumer tends to lower this uncertainty by recommending those brands for which he perceives a high guarantee.

Brand association would provide consumers with a purchasing reason, because most brand associations are related to brand attributes, the target consumer market, and the benefits that consumers need, so that they form the foundation of brand loyalty and consumers’ purchasing decisions (Len TW, Cindy M, Lynn MM 2007).

3. Objectives of the present study :

- 1) To measure the relationship between demographic variables and opinion about ceramic tiles in general.
- 2) To find out the ceramic tiles company that has the highest brand association among the customers.

4. Need for the study:

Now a days dramatic and drastic changes are occurring in construction of buildings based on taste and convenience of human beings, in adorning his/her buildings with different building materials like tiles, paints and wood. On decorative and hygiene grounds, ceramic tiles play a major role for interior, exterior, bath rooms and parking areas. Many branded and unbranded tiles are being sold in different colours, sizes and qualities. There is a cut throat competition among few existing ceramic brands. Customers are loyal to the most preferred brand and move to next brand with a capacity to create better awareness on brand. Hence each company should strive hard to create better awareness on brands to gain an edge over its competitors in terms of market share. The present study is intended to measure most associated ceramic tile brand of various brands in the market. This will help companies and distributors to find out their position in the market.

4.1 Hypotheses:

Ho1: There is no significant relation between customer’s demographic and behavioural variables and opinion about the characteristics of ceramic tiles.

Ho2: There is no significant association between the factors of brand association of various brands of ceramic tiles and his/her demographic and behavioural characteristics.

5. Research Methodology:

The present study illustrates the customer's buying behaviour on different brands of ceramic tiles. Primary as well as secondary data are used in the present study. It consists of the opinion of 504 respondents by using a close-ended questionnaire containing three sections. Section 1 contains customer demographics variables like gender, educational qualification, age, respondent's job characteristics. Section 2 details the characteristics of ceramic tiles in general and Section 3 brand association factors that influence the customer's buying behaviour towards ceramic tiles. Statistical tools like ANOVA, Chi-square, t-test are used to analyze the primary data.

Sampling: Convenience sampling technique was used to collect data from a sample of 504 customers. The survey schedule was the five-point Likert scale ranging from five (strongly agree) to one (strongly disagree) was used to find out how the brand association factors that influenced the customer's buying behaviour of ceramic tile brands. The demographic and behavioural characteristics of the sample respondents (N=504) are as follows.

Table 1: Sample selection

S.no	Variable	Frequency	Percentages
Gender			
A	Male	326	64.7
B	Female	178	35.3
Age(in yrs)			
A	30-40 yrs	46	9.1
B	41-50yrs	235	46.6
C	51-60 yrs	150	29.8
D	60 yrs above	73	14.5
Qualification			
A	Primary	58	11.5
B	S.S.C	169	33.5
C	Graduation	141	27.9
D	Post graduation	136	26.9
Occupation			
A	Employee	98	19.4
B	Business man	174	34.5
C	Professional	81	16.1
D	Agriculturist	151	30.5
Construction cost (Rs)			
A	25 lakhs	161	31.9
B	26-35 lakhs	76	15.1
C	36-45 lakhs	108	21.4
D	Above 45 lakhs	159	31.5

6. RESULTS AND DISCUSSION:

Following analysis gives the empirical evidence of the respondents' demographical variables relation with ceramic tile's characteristics and Brand association with customer's buying behaviour.

Table 2: Gender wise opinion on ceramic tile's characteristics (Independent sample t-test)

Gender	N	Mean	Std. Deviation	t-value	p-value
Male	326	74.22	5.76	.693	.488
Female	178	73.83	6.31		
Total	504	74.08	5.96		

Source: Primary data.

The null hypothesis (Ho1) is accepted as the calculated 't' value 0.693 is greater than 0.05 at 5% level, and so the result is not significant. It could be concluded that *'there is no significant relation between customer's demographic and behavioral variables and opinion about ceramic tiles characteristics'*. It means respondent's opinion about characteristics of ceramic tiles is not dependent on their gender.

Table 3: Age-wise opinion on ceramic tile's characteristics (One-way ANOVA)

Age	N	Mean	Std. deviation	F-value	p-value
Below 30 years	46	73.39	6.00	1.359	0.255
31 - 40 years	235	74.60	5.90		
41 - 50 years	150	73.46	5.72		
51 and above years	73	74.14	6.58		
Total	504	74.08	5.96		

Source: Primary data

It is concluded that the null hypothesis (Ho1) is accepted as the calculated 'p' value 0.255 is greater than 0.05 at 5% level, and hence the result is not significant. It says that *'there is no significant relation between customer's demographic and behavioral variables and opinion about the characteristics of ceramic tiles'*. It means age groups of respondents differ from the one another in their opinion about the characters of the ceramic tiles.

Table 4: Education-wise opinion on ceramic tile's characteristics (One-way ANOVA)

Education	N	Mean	Std. deviation	F-value	P-value
Primary	48	74.22	6.03	0.870	0.482
S.S.C	147	73.78	6.13		
Graduation	119	74.42	5.50		
Post graduation	124	73.56	6.07		
Total	504	74.08	5.96		

Source: Primary data.

From the above analysis null hypothesis (Ho1) is accepted as the calculated 'p' value 0.482 is greater than 0.05 at 5% level. Therefore, we can say that *'there is no significant relation between customer's demographic and behavioral variables and opinion about ceramic tiles characteristics'*. It means respondent's educational qualification does not have any impact on focusing similar opinion about ceramic tile's characteristics.

Table 5: Occupation-wise opinion on ceramic tiles' characteristics (One-way ANOVA)

Occupation	N	Mean	Std. deviation	F-value	P-value
Employee	98	74.77	5.70	1.766	0.153
Business	174	73.58	5.71		
Professional	81	75.04	5.67		
Agriculturist	151	73.69	6.49		
Total	504	74.08	5.96		

Source: Primary data.

The null hypothesis (Ho1) is accepted as the calculated 'p' value 0.153 is greater than 0.05 at 5% level, and hence the result is not significant. It says that *'there is no significant relation between customer's demographic and behavioral variables and opinion about ceramic tiles' characteristics'*. We can say that respondents opinion about ceramic tile's characteristics is not depend on their occupation.

Table 6: Construction cost-wise opinion on ceramic tile's characteristics (One-way ANOVA)

Construction cost (Usage rate)	N	Mean	Std. deviation	F-value	P-value
Below Rs.25 lakhs	161	74.68	6.42	4.383**	0.005
Rs.26 - Rs.35 lakhs	76	72.07	5.45		
Rs.36 - 45 lakhs	108	74.96	5.61		
45 lakhs and above	159	73.84	5.75		
Total	504	74.08	5.96		

Source: Primary data.

We can reject the null hypothesis (H_0) because the calculated 'p' value 0.005 is less than 0.05 at 5% level, and hence the result is significant. It could be concluded that *'there is a significant relation between customer's demographic and behavioral variables and opinion about ceramic tiles' characteristics.*

Reason: Respondent's opinion on ceramic tile's characteristics is dependent on the construction cost of the building. It means ceramic tiles have satisfied low, medium and high-end customers on price-wise, size-wise and design-wise when compared with that of flooring materials like marble, granite, and wood.

Suggestion: Brand owners have to update their knowledge for satisfying all types of customers on price availability of material in all sizes with different designs for facing competition from other flooring material like marble, granite and wood.

Table 7: Opinion on Association between gender and brand association

Chi-square value	p-Value	Brand Equity			Total (N)
2.469	0.291	Low	Moderate	High	
Gender	Male	83	145	98	326
	Female	56	77	45	178
Total		139	222	143	504

Result: It can be observed that the H_0 is accepted because the calculated p-value 0.291 is greater than 0.05 at 5% level. It is proved that, *"there is no significant association between customer gender and brand association with ceramic tile brands"*. It says that customer's gender will not decide his close association with branded ceramic tiles.

Table 8: Opinion on Association between age and brand association

Chi-square value	p-Value	Brand Equity			Total (N)
8.819	0.184	Low	Moderate	High	
Age	Below 30 years	14	23	9	46
	31 - 40 years	56	108	71	235
	41 - 50 years	44	68	38	150
	51 and above years	25	23	25	73
Total		139	222	143	504

Result: The percentages in table 8 represent the identical level of brand association. The same fact is also revealed in the chi-square test with p-value 0.184(>0.05) and so the result is not significant. Therefore, it can be stated that, *"there is no significant association between age and brand association with ceramic tile brands"*. It means that customers of different age groups have different levels of association with branded ceramic tiles.

Table 9: Opinion on Association between educational qualification and brand association

Chi-square value	p-Value	Brand Equity			Total (N)
169.66	0.000	Low	Moderate	High	
Educational qualification	Primary	24	24	0	48
	SSC	80	67	0	147
	Graduation	12	54	53	119
	Post-graduation	23	77	90	190
Total		139	222	143	504

Result: The null hypothesis H_01 is rejected as the calculated p-value 0.000 is less than 0.05 at 5% level. It says that, “there is a significant association between respondent’s educational qualification and brand association with ceramic tile brands”. It means that association with purchasing branded ceramic tiles would depend on the respondent’s educational qualification

Reason: Brand association plays a vital role in every movement of brand improvement. There is a positive association between education level of customer and their association with brand. Educators can easily capture the benefits of brand association. Illiterates can feel the benefits of brand association but they can’t identify it.

Suggestions: Educated customers know all the descriptive information (background music of ads, slogans, etc) about different brands of ceramic tiles. For illiterates, brand owners have to offer some free gifts (key chains, printed t-shirts etc) which describes their brand.

10: Opinion on Association between respondents’ occupation and brand association

Chi-square value	p-Value	Brand equity			Total (N)
161.72	0.000	Low	Moderate	High	
Occupation	Employee	4	41	53	98
	Businessmen	43	81	50	174
	Professional	5	36	40	81
	Agriculturist	87	64	0	151
Total		139	222	143	504

Result: From the above analysis the null hypothesis H_02 is rejected as the calculated p-value 0.000 is less than 0.05 at 5% level. Therefore we can say that, “there is a significant association between respondent’s occupation and brand association with branded ceramic tiles”. It means that respondent’s occupation would decide their association with branded ceramic tiles.

Reason: Customers of different occupations have different types of awareness on their association with branded ceramic tiles. Employees, professionals and business men predict the association with branded ceramic tiles. Farmers have less knowledge on their association with branded ceramic tiles.

Suggestions: Professionals and businessmen need to know feedback on usage of branded ceramic tiles. Brand owners need to explain to the ignorant customers about the elements of association of their brand.

Table 11: Opinion on Association between construction cost of the building and brand association

Chi-square value	p-Value	Brand Equity			Total (N)
43.21	0.000	Low	Moderate	High	
Cost of Building	Below Rs.25 lakhs	61	70	30	161

(Rs.)	Rs.26 - Rs.35 lakhs	33	31	12	76
	Rs.36 - 45 lakhs	19	51	38	108
	45 lakhs and above	26	70	63	159
Total		139	222	143	504

Result: It is concluded that the null hypothesis H_02 is rejected as the calculated p-value 0.000 is less than 0.05 at 5% level. It says that, “*there is a significant association between construction cost of the building and brand association with ceramic tiles brands*”. It means that association of the branded ceramic tiles would decide the estimation cost of the building.

Reason: Estimated construction cost decides which type of tiles have to be used i.e either branded ceramic tiles or unbranded ceramic tiles. There is a positive relation between brand association and construction cost of the building. Regular users know the brand association of their preferred ceramic tile brand.

Suggestions: The brand association of large scale buyers is comparatively higher than that of small quantity using customers. Large scale buyers can gather more relevant information from shops of different branded ceramic tiles before purchasing.

Table 12: Opinion on Highly associated ceramic tiles brand

Most preferable brand	Frequency	Percent
Johnson	172	34.12
Kajaria	170	33.73
Nitco	89	17.65
Somany	73	14.50
Total	504	100.0

We conclude that based on Brand association the customers give first priority to Johnson ceramic tile brand followed as Kajaria, Nitco and Somany occupied the second, third and the fourth places in customers mind simultaneously

7. Conclusion:

This study examined the relationship between customers’ demographic and behavioural variables as independent variable and Brand association towards ceramic tile brands as dependent variable. ANOVA test which is found that there is no significant relation between demographic variables and opinion on ceramic tiles characteristics. Chi-square test explored the significant association between Brand association and the four major ceramic tile brands. Therefore, we conclude that based on brand association the customers give first priority to Johnson ceramic tile brand followed Kajaria, Somany and Nitco.

Further, it is suggested that future research can be undertaken on the other factors of brand equity such as overall brand equity. Besides, the survey can be undertaken in other markets in India.

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Schedule

Section I – Personal details

- 1) Name:
- 2) Residential address:
- 3) Gender:
 - a) Male b) Female
- 4) Educational qualification:
 - a) Primary b) S.S.C c) Graduation d) Post graduation e) Professional degree holder
- 5) Age (Years):
 - a) Below 30 b) 31 - 40 c) 41 – 50 d) 51 above
- 6) What is your job?
 - a) Employee b) Business man c) Professional d) Agriculturist
- 7) Type of building you are constructing:
 - a) Individual house b) Apartment c) Commercial complex d) Government buildings
- 8) Area of your building:
 - a) <1000 sft b) 1001 – 5000 sft c) 5001 – 10000 sft d) >10001 sft
- 9) Construction cost of building (Rs):
 - a) Below 25 lakhs b) 26 – 35 lakhs c) 36 – 45 lakhs d) 45 lakhs above

Section II – Ceramic tiles characters

- 10) Mark (✓) your opinion about ceramic tiles?

Factor	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Low price					
Different colors					
Different sizes					
Good appearance					
Easy clean					
Hygienic					
Scratch free					

Stain free					
Easy laying					
Acid proof					
Easy to change					
Low maintenance					
Long lasting					
Low wear & tare					

Section III – Brand association assessment

11) Which is the most preferable brand of ceramic tiles for your construction?

a) Johnson b) Kajaria c) Somany d) Nitco

12) Following is the table with a set of statements with regard to brand association on ceramic tiles. You are requested to mark 'x' as your choice of agreement or disagreement based on the indicators as given below:

trongly agree (SA)=5, Agree(A)=4 ,Neutral(N)=3, Disagree(D)=2, Strongly disagree(SD)=1.

S.no	Statement	SA 5	A 4	N 3	D 2	SD 1
1	I have known all descriptive information about this particular brand.	5	4	3	2	1
2	I have known all feedback information about this particular brand after usage	5	4	3	2	1
3	Positive brand image and word of mouth publicity leads to encourage new customers.	5	4	3	2	1
4	Others follow me, since I like the calendars and logo of the brand as display at our home.	5	4	3	2	1
5	People praise my house appearance because of the particular brand of ceramic tiles I use.	5	4	3	2	1
6	I am identified by others for the benefits obtained from using the brand of ceramic tiles.	5	4	3	2	1
7	Product range and schemes offered by this brand are extensive and help in attracting new customers.	5	4	3	2	1
8	This brand has lot of goodwill that leads to obstruct the competitor's entry into the market.	5	4	3	2	1
9	People identify me for the brand of ceramic tiles that I buy.	5	4	3	2	1
10	Company people maintain good rapport with the customers for repeated buying.	5	4	3	2	1
11	Company provides suitable adhesives to large scale customers free of cost.	5	4	3	2	1
12	Slogan of this brand is meaningful and predictable.	5	4	3	2	1
13	Company provides manuals to the customers for more awareness on laying tips.	5	4	3	2	1
14	Distributors of competing brands are also want to display the samples of this brand for improving their business.	5	4	3	2	1
15	Company has to open large number of retail outlets' for improving service to the customers.	5	4	3	2	1