

Predicting Green Brand Equity Through Green Brand Credibility

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Abstract

The major purpose of this study was based on the examination of novelty construct of green brand credibility and its impact on green brand equity with mediation effect of green attitude towards brand. According to statistical analysis it has been found that green brand credibility and green brand equity are positively related whereas green attitude partially mediates this relationship. This study will help entrepreneur and managers to understand the importance of green brand credibility for enhancing green brand equity.

Keywords: Green brand credibility, Green brand equity, Green attitude towards brand, Green products, Brands, Pakistan.

Introduction

Environmental pollution issue is at its peak in present era and it is the direct result of industrial manufacturing around the globe and people are showing a lot of concern about environmental pollution problem (Chen, 2008a). Corporations in the world are paying attention toward their environmental responsibility as customers of today are sensitive about environment due to global warming and other environmental issues (Chen, 2006a). As a result green products are gaining a favorable response from customers in the world and customers show a lot of respect for green manufacturer but marketing green products is not possible for all corporations due to their limited capability (Chen, Lai, & Wen, 2006). According to (Ottman, 1992), if companies want to reap the benefit of green marketing as their marketing strategy then they need to incorporate environmental concern in all aspects of marketing and if companies are successful to address environmental issue with green products to satisfy their customer then customer would be more loyal.

Customer loyalty has become a major challenge due to this entire changing market scenario. According to Erdem, Swait, & Valenzuela, (2006), brand credibility is a major factor that influences

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customer loyalty and purchase decision. Brands provide identity to a product or service from a specific manufacturer; on other hand customers in the market observe so many products with limited or no exact information that causes confusion in the mind of customers (MacInnis & Jaworski, 1989). When asymmetric information prevails in market then brands are good devices to communicate particular signal and if these signals are credible then it earns fruitful results for companies. So brand credibility matters a lot for corporations and it is having a direct impact on brand equity (Erdem & Swait, 2004).

During last decade the sales of green products are increasing with a rapid pace in response of environmentalism and green products are gaining more attraction for customers (Chen, 2008b). So incorporating green marketing activities many raise the intangible green brand equities (Neal & Strauss, 2008).

Attitude is a behavior of object which shows comparatively permanent evaluation of any specific object (Shrigley & Koballa, 1984). Thus it is evident, more the customers evaluates the quality of a product and its credibility the more is the chance that they will end up their evaluation influenced by their environmental specific perception and attitude toward that green brand.

The expensive exploration of existing literature opens the fact that consumers of today paying a lot of attention towards green products (Chen, 2008b, Neal & Strauss, 2008, Chen, 2008a, Chen, Lai, & Wen, 2006, Nagar, 2015).

Literature

Green Brand Credibility and Green brand equity

Brand serves as a symbol of product positioning so brand credibility is a crucial element of branding for a decent brand positioning (Aghdaie, Dolatabadi, & Aliabadi, 2012). According to Erdem & Swait, (2004), for managing brand equity brand credibility is the most important factor. In addition, Spry, Pappu, & Bettina Cornwell, (2011) stated that brand credibility is all about constantly believing in product location and benefits based on consumer perception of that particular brand. Those organizations which produce Eco-friendly or environmental friendly products have positive impact on satisfaction level of customers (Ng, Butt, Khong, & Ong, 2014). According to Ohanian (1990) source brand credibility means the correct norms by a sender that effect the perception of receiver in positive way. That person can be a person, company, entity or a brand (Wang & Yang, 2010). Previous research studies from different researchers (Erdem & Swait, 2004; Keller, Apéria, & Georgson, 2008) have identified three major dimensions of conventional brand credibility.

In the context of green brand credibility, trustworthiness can be regarded in which a brand is reliable source of information for environmentalism. Whereas expertise means the brand has skills to incorporate green element into branding strategies. Finally, attractiveness refers to the extent if brand is valued on green horizon by personality characteristics. According to Ng, Butt, Khong, & Ong (2014) environmental performance is major factors that contribute for enhancing consumer believes about the credibility of brand. Similarly in his research Kaur, (2011b) indicated that perceived environmental performance is directly linked to brand preference.

In light of above discussion, perceived environmental performance can be added as fourth dimension for tapping the concept of green brand equity. These following hypothesis has been crafted.

H1: *Green brand credibility positively influences green brand equity of brand.*

Green brand credibility, green Attitude Toward Brand and Green Brand Equity

A theory developed by Ajzen & Fishbein, (1977) explains the relationship among attitude and their behavior intentions. They stated that attitude affects behavioral intentions and behavioral intentions affect the behavior of a person. A person's attitude and behavioral intentions are shaped by information that he or she has in total (Ruiz-Molina & Gil-Saura, 2008). Attitude is relatively permanent evaluation of an object (Eagly & Chaiken, 2007) and the attitude is stable and durable tendency of a person to behave in a specific way (Ruiz-Molina & Gil-Saura, 2008) hence attitudes are useful predictors to assess behavior of customers towards a product or service. The theory explain that intentions are outcome of following.

1. *Attitude toward behavior:* refers to the level of appraisal of specific behavior and when this appraisal from customers is positive then they show positive behavior. (Ajzen & Fishbein, 1977)
2. *Subjective norms:* deals with perceived social pressure for displaying or not displaying a specific behavior. This norm heavily relates to the perception of individual how other person will evaluate his suggestive behavior (Ajzen & Fishbein, 1977).
3. *Perceived behavioral control:* the extent to which a person perceives comfort or discomfort for displaying a specific behavior (Ajzen & Fishbein, 1977)

So based on theory of planned behavior and different research studies from different researchers (Ajzen & Fishbein, 1977; Ruiz-Molina & Gil-Saura, 2008; Jahangir & Begum, 2007) the

predictive power of attitude behavior process positively influence green brand equity. The brands with green philosophy can enhance the emotional connection with customers and improves customer loyalty (Ginsberg & Bloom, 2004). The green image is also regarded to increase in sales and stock prices of a firm (Marshall & Mayer, 1992). According to Goldsmith, Lafferty, & Newell, (2000) perceived expertise and trustworthiness will influence consumer's attitude positively.

Credibility of a brand determines the level to which customers perceives the green claim of a specific brand to be truthful (Goldsmith et al., 2000; Kim & Lynn Damhorst, 1999). As mentioned by Hodges, Szymecko, & Davis, (2003) customer's trust about a brand is influenced to the extent to which customers feel the communicator is trustworthy. Many corporations attempt to achieve truthfulness in terms of environmentalism by different means like eco labeling and etc (Nimon & Beghin, 1999). Eco labels are valued by customers to input their purchase decisions (Thogersen, 2002). Therefore eco labeling and other information related to environmental concern influence buyer's evaluation of green brand in positive way (Buda & Zhang, 2000). Based on above discussion it is suggested that

H2: *Green brand credibility influences green attitude towards brand positively and significantly.*

H3: *Green brand attitude will positively influence green brand equity*

H4: *Green brand attitude mediates the relationship between green brand credibility and green brand equity.*

Variables and Items

For measuring green brand credibility the researcher used the scale of Newell & Goldsmith, (2001) and Erdem & Swait, (2004) for measuring trustworthiness, attractiveness and expertise (sample item= This brand delivers what it promises). This scale was composed of ten items and perceived environmental performance was measured using the scale of Grandzol & Gershon, (1998) ; Soo Wee & Quazi, 2005) and Awasthi, Chauhan, & Goyal, (2010). Perceived environmental performance scale was comprised of ten items (sample item= I believe this brand uses environmental friendly material). So a total of 20 items were included for measuring the construct of brand credibility. All items were measured on a five point likert scale ranging from strongly disagree to strongly agree.

Similarly, green attitude was measured using the three items scale of Homer, (1990) as it has been used more frequently for measuring attitude towards brand over (sample item= My attitude toward the brand is Favorable due to its environmental consideration)

last thirty years and this scale has recognized itself as a traditional paradigm in the field of marketing (Fabrigar, MacDonald, & Wegener, 2005). The scale of green brand credibility was adapted from Chen & Chang, (2012, 2013) and this scale was consisting of four items (sample item= It makes sense to buy this brand instead of other brands because of its environmental commitments, even if they are the same.) for measuring the construct of green brand credibility. The scale was assessed on 5 point likert scale from strongly disagree to strongly agree.

Population and Sample size

The population of this study was the green electronic or electric product users in Pakistan and sample data was collected from the cities. The reason for choosing this product category (electronic or electric products) was that as this sector is considered as one of the major factors for environmental pollution and consumers are demanding more eco friendly products in this segment Badgie, Samah, Manaf, & Muda, 2012; Hawari & Hassan, 2010. A total of 430 questionnaires were distributed randomly among different respondents from the city of Lahore who were willing to participate in survey. For this purpose different electronic markets were frequently visited in different timings and days. The respondents were asked a screening question of whether they have experience of using or purchasing a green electronic or electric product. Those who answered in yes were invited to participate in survey. Out of 430 questionnaires a total of 316 questions were found useful for data analysis hence the response rate remained 73 percent that is reasonable response.

Results and Analysis

Table 1, presents the results of frequency distribution and percentages in terms of gender of respondents. As we can see from below table the frequency of males in this survey is 211 that is almost 67 percent of total respondents of this study similarly, the frequency of females is 105 that is 33 percent of total respondents. So it is obvious from the data that the frequency of males is much higher as compared to females and it is justified too as in Pakistan its male dominant society and major purchase decisions are taken by males especially in the category of electronic or electric appliances.

Table 1

Gender distribution of survey

Categories of gender	Frequency	Percent
Male	211	66.8

Females	105	33.2
Total	316	100.0

Table 2 presents the results of descriptive in term of age level of respondents, as it is clear from this table that the age bracket of respondents above age 40 is having highest frequency that is almost half of the total respondents in survey and the age bracket of 20 to 25 is lowest in this regard as it is only 22 in term of frequency.

Table 2
Age level of respondents

Age Limits	Frequency	Percent
20-25	22	7.0
26-30	64	20.3
31-40	77	24.4
Above 40	153	48.4
Total	316	100

Table 3 describes the statistics for education level of respondents, according to the results of table 3 most of the respondents were having graduate level of education and a reasonable number of respondents were above the graduate level in term of education.

Table 3: Respondents 'Education

Degree/Diploma	Rate	%
Under graduate	47	14.9
Graduate	176	55.7
Post Graduate	93	29.4
Total	320	100

Table 4 shows Harman's one-factor test (Podsakoff et al.2003) and the results revealed that single factor analysis does not account for high level of total variance explained as it was only about 30 percent for total of 27 factors . So there was no single general factor as it does not represent majority of variance explained (Malhotra, Kim, & Patil, 2006).

So the measurement models were established using CFA to asses if the factors are loaded around their respective construct. The results confirmed that each factor loaded to its respective construct. In table 4 all these major results are shown. And according to these results all variables have significant regression weights with loading to respective constructs. The composite reliability and average variance extracted were beyond the acceptable value range. According to Yap & Khong, (2006) the cut-off value for composite reliability is 0.7 and for AVE it is 0.5. So as it can be seen from table 5, all the results are significant and beyond the cutoff value.

Table 4
Factor loadings, reliability and AVEs

Construct	Variable	Loadings	Cronbach Alpha	Composite Reliability	AVE
BC	BC1	0.651**	0.859	0.8611	0.616
	BC2	0.708**			
	BC3	0.751**			
	BC4	0.592**			
	BC5	0.533**			
	BC6	0.688**			
	BC7	0.742**			
	BC8	0.757**			
	BC9	0.801**			
	BC10	0.739**			
	BC11	0.746**			
	BC12	0.681**			
	BC13	0.532**			
	BC14	0.751**			
	BC15	0.871**			
	BC16	0.711**			
	BC17	0.658**			
	BC18	0.611**			
	BC19	0.844**			
	BC20	0.561**			
AT	AT1	0.609**	0.753	0.7582	0.593
	AT2	0.848**			
	AT3	0.595**			
GBE	GBE1	0.690**	0.838	0.8411	0.647
	GBE2	0.746**			
	GBE3	0.836**			
	GBE4	0.743**			

Fornell & Larcker (1981) criteria was applied to performed discriminant validity. Table 6 has been presented discriminant validity. It has been showed that value of correlation is less than the value of square root of AVE. The value of correlation between green attitude towards brand and green brand credibility is .431** and the values of square root of average variance extracted for green brand credibility and green attitude towards brand are 0.785 and 0.770. The lowest correlation in this regard is between green brand equity and green brand attitude towards brand and its value is 0.383 with square roots of AVE 0.770 for green attitude towards brand and 0.804 for green brand equity. According to results So it is evident all constructs have discriminant validity. So it has been proved that variables in proposed research framework are valid (Yap & Khong, 2006).

Table 5 Discriminate Validity result among constructs

Constructs	BC	AT	GBE
BC	1		
AT	.431**	1	

	(.785,.770)	1	
GBE	.496**	.383**	
	(.785,.804)	(.770, .804)	1

Note. Results of discriminate validity, values in bracket present square root of average variance extracted AVE and values without bracket indicate correlations

Table 6 describes the results of model fit indices of structural model in present study. The overall results of model fit indices indicate that there is no issue of model fit in present study and model fit is very good. The commonly reported fit indices like GFI, NFI, TLI, CFI and AGFI and others are greater than the threshold value of 0.9. Similarly the value of χ^2/df ($381/268 = 1.42$) is less than the acceptable value of 3 (Schumacker & Lomax, 2004). Hence according to table 6 all fit indices are above the acceptable value and show good model fitness.

Table 6 Statistical summary of Model fit indices

Fit Index	Recommended Ratios	Values
χ^2	-	381.432
Df	-	268
χ^2	$p \leq 0.05$	0.000
Significance		
χ^2/Df	< 3.0	1.421
GFI	>0.90	0.933
AGFI	>0.90	0.921
NFI	>0.90	0.937
CFI	>0.90	0.924
TLI	>0.90	0.873
RMSEA	<0.08	0.043
RMR	<0.05	0.041

Note. *Source: Schumacker and Lomax (2004)

Table 7 shows the results of structural equation modeling SEM for assessing the hypothesized relationship among different constructs. As we can see that our H1 was about positive relationship of green brand credibility and green brand equity. According to the results of H1, the beta value is 0.27 that is positive and shows there is a positive change in green brand equity due to green brand credibility. Similarly the value of CR is significant and P value is also less than 0.05. All these results provide sufficient ground to reject null hypothesis for H1 and hence it is statistically proved that there is positive association between green brand credibility and green brand equity.

The results for H2 are also significant and positive as the beta and CR values are positive and P value is significant so based on these results, our H2 is proved to be true and there is positive effect of green attitude towards brand green brand equity. The statistical findings for H3 are also in line with the statement of H3 that was to

check the positive relation between green attitude towards brand and green brand equity.

Finally the results of mediation analysis confirmed that there is mediation effect between the relationship of green brand credibility and green brand equity as the beta value is reduced in this case but P value is significant so partial mediation is happening between the relationship of green brand credibility and green brand equity. So green attitude mediates the relationship between green brand credibility and green brand equity hence our H4 is also significant and positive.

Table 7

Results of overall hypothesis with estimates

Hypothesis	Structural Path	β value		C.R	P-Value	Significant/In Significant
		Estimate	Standard Error			
H1	BBE <----- BC	.27	.043	6.279	***	Significant
H2	AT <----- BC	.201	.076	2.644	***	Significant
H3	GBE <----- AT	.124	.031	4.096	.017	Significant
H4	GBE <----- AT <----- BC	.129	.038	3.394	***	Significant

Conclusion

The present study is of first kind of research that is presenting novel construct of green brand credibility and its impact on green brand equity. The study explored that green brand credibility positively influence green brand equity and green attitude toward brand works as a mediator between the relationship of green brand credibility and green brand equity. Furthermore this mediation is partial, the study has several theoretical and practical implications for instance it will contribute in existing literature as it has introduced the novel construct of green brand credibility and its impact on green brand equity. Previous research studies have investigated the impact of conventional brand credibility and brand equity. But this study is first to relate green brand credibility and green brand equity with green attitude as mediator. Furthermore, there are some important practical implications of this research study. The savvy marketers and brand managers of corporations will have to focus on the elements of green brand credibility to improve green brand equity of their organization. The results of this study proved that ignoring green brand credibility will not be a good strategy. There are several research studies

highlighting the importance of environmentalism and its impact on brand (Ruiz-Molina & Gil-Saura, 2008; Bigliardi, Bertolini, Mourad, & Serag Eldin Ahmed, 2012). Results of current study are consistent with the findings of Ng, Butt, Khong, & Ong, (2014) who investigated the effect of brand credibility on green brand equity with multi mediation.

The current study also has some potential limitations for example, the study focused only one sector that is electric or electronic green products. So the generalizability of the results is questionable in other sectors. The future research studies should consider other sectors as well. Similarly the study was limited only to one geographical area (Lahore city of Pakistan) in future the same study should be tested in multiple geographical areas. The nature of data was cross sectional and it is another limitation of this research study so future research is suggested to perform the analysis on time series data. Similarly, questionnaire technique is not suitable for tapping the construct of green brand credibility and green brand equity so for detailed information interview technique may be used.

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