

Moderating Role of Brand Trust on Offline vs Online Shoppers and its Impact on Cognitive Dissonance

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Abstract

Brand trust plays a decisive role in the choice of a brand during product purchase. It is also well known that online shopping causes higher cognitive dissonance as compared to offline mode of shopping. Trust in the brand has a soothing effect and is thus found to decrease cognitive dissonance. This study was conceived to explore the interrelationship between online and offline shopping, brand trust, and cognitive dissonance. The hypotheses of the study were formalized to investigate the influence of brand trust on cognitive dissonance and the impact of mode of shopping chosen by a customer on cognitive dissonance. The paper also investigated the moderating role of brand trust on both the independent variable (mode of shopping) and dependent variable (cognitive dissonance). A survey was conducted with 302 consumers of mobile phones who had purchased a mobile phone either from an online or offline store. The direct impact and interaction effects of brand trust on cognitive dissonance and mode of shopping were tested using continuous moderation, PROCESS macro of Andrew F. Hayes in SPSS 23. Brand trust displayed a significant moderating effect between mode of shopping, that is, online and offline stores and cognitive dissonance. The findings of the study are found to be critical for multi-channel retailers, particularly those who have their presence in both online as well as brick and mortar store set up.

Keywords : brand trust, brand trust scale, online & offline shoppers, cognitive dissonance, cognitive dissonance scale, PROCESS macro

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The significant rise in the use of the web as a shopping platform in the last few years has given way to researchers to investigate the booming interest of consumers and their behavioural differences in the shopping modes followed by the investigation on other attributes that potentially affect the consumer decision process and the post-purchase dissonance. Studies have shown that high involvement products that require touch, smell, and feel component are shopped offline (Chiang & Dholakia, 2003). Another research stated that self-inspection of the product gives immense satisfaction to the consumers, therefore, they prefer offline stores for shopping (Levin, Levin, & Heath, 2003). On the other hand, extreme low touch point products are

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mostly purchased online such as hotel booking, air tickets (Girard, Silverblatt, & Korgaonkar, 2002) ; whereas, in an offline setup, customers prefer individual involvement and see – touch – handle characteristics of the item (Levin, Levin, & Weller, 2005). Here, brand trust also plays a pivotal role in the selection of the shopping mode. Various studies have demonstrated the impact of brand trust in online shopping (Ha, 2004 ; Hahn & Kim, 2009). The importance of brand trust has undoubtedly helped Internet companies in their strategies to reduce product differentiation (Ha, 2004).

In addition to this, when customers have to choose from large alternatives, they may feel cerebral distress, since they have to select one out of many options (Solomon, Bamossy, Askegaard, & Hogg, 2006). This distress multiplies as the customer purchases a high involvement or speciality product (Kotler, 2001). This feeling of distress is termed as cognitive dissonance. There are some researchers who have explored the various factors that can reduce the impact of cognitive dissonance (Dutta & Biswas, 2005 ; Geva, 1991). Festinger theory suggests that the root cause of dissonance is when a decision occurs between two or more alternatives. Extreme cognitive dissonance may cause a high level of dissatisfaction, and a consumer may repent his/her purchase decision (Lake, 2009). Cognitive dissonance is a psychologically uncomfortable state that motivates a person to regret upon a decision made. Considering the above discussion, the purpose of the study is to analyze brand trust as a possible alternating factor between mode of shopping and cognitive dissonance by using the moderation model.

Review of Literature

Trust in the brand is defined as the company's belief in the reliability and intentions of the brand (Chaudhuri & Holbrook, 2001). Winch and Joyce (2006) stated that trust acts as a catalyst in the decision-making process of online and offline shopping. Based on trust, online payment transactions are undertaken by the consumers (Bart, Shankar, Sultan, & Urban, 2005 ; Winch & Joyce, 2006). As a prerequisite to online shopping, the customer seeks detailed information about products and services. After gathering information and knowledge, the customer finalizes the product (Shim, Eastlick, Lotz, & Warrington, 2001). Risks related to finances, product quality, and personal information privacy may hinder the purchase decision ; thus, trust is the only factor in an online store that helps to reduce the perceived risk (Bart et al., 2005 ; Winch & Joyce, 2006). Kim and Peterson (2017) revealed that particular antecedents showed a significant bonding with e-trust (e.g., perceived privacy, perceived service quality) and consequences (e.g., loyalty, repeat purchase intention).

Lui, Marchewka, Lu, and Yu (2005) found that trust was a crucial factor in foreseeing shopper's aim to purchase online. Kuan and Bock (2007) also agreed upon the positive affiliation between online store trust and online shopping intent. Besides, consumer perceptions of brand trust and redemption objectives were reviewed by Zboja and Voorhees (2006). They found that customer satisfaction and repetitive purchases were interlinked when brand trust came into play. Considering past studies (Ahmad & Thyagaraj, 2015 ; Panda, Swar, & Mukerjee, 2014), it is observed that when shoppers believe in a brick and mortar store, they will purchase items on the same online store model. Moreover, they are prepared to invest more energy at the retailer's website and spread positive word of mouth for the same store online for others.

Chuang and Fan (2011) examined the mediating role of trust in the relationship between the quality of the e-merchant and the intent of the customer. The major reason for this examination was to investigate the part of trust concerning the nature of the e-retailer and the customer buying intention. The results showed that trust played a vital role as an intermediary between the quality of the electronic distributor and the intention of the buyer to buy online. Nagra and Gopal (2013) conducted a study on the factors that affected consumers' online shopping behaviour. This investigation utilized subjective and quantitative research strategies to consider the effect of online statistic parameters, for example, fulfillment with online buys, future buy purpose, and recurrence of online buys.

Shobeiri, Mazaheri, and Laroche (2015) reviewed online purchases of service-related products. The study examined how the type of offer sold online (goods and services) moderated the relationship between perceived experiential values and customer attitudes towards the site.

Consumers are affected by a few important considerations during the buying process. These considerations incorporate increasing the exactness of the choice, limiting the effort in making a choice, reducing negative feelings while making a decision, and boosting the simplicity of the decision process. These were also emphasized by two studies on breakfast consumption behaviour in India (Simon & Manohar, 2017 ; Tomar, 2017). In such a decision-making process, the customer arrives at a solution with limited rationality and limited information, which is gathered through online sources (Bettman, Luce, & Payne, 2008). Decisions are based on heuristics (Tversky & Kahneman, 1974). Nonetheless, the possibility of providing buyers with more data points troubles the basic decision-making and, in this manner, a simple choice becomes the matter of deliberation (Bettman et al., 2008).

In fact, in decision making, the quantity of information plays a major role apart from the number of attributes and substitutes. As the number of possible characteristics increases, the decision making becomes more complicated. This, in turn, makes the selection process difficult (Lurie, 2004). There is a cost to information processing, and consumers suffer costs, which increase with increasing decision complexity (Wierenga, 2008). Kotler (2001) measured this cost as an emotional cost in the value comparison, where consumers gain benefits and incur costs. A point to remember is that when the many-sided quality of the choice builds, individuals attempt to decrease the difficulty by utilizing their strategies. To do this, consumers rely on heuristics (Tversky & Kahneman, 1974) or simply rely on their last purchase decision to achieve the cerebral satisfaction of the purchase occurred, though in some cases, this is not an ideal deal (Wierenga, 2008).

Along these lines, this stage can be the starting point of duality (Richter, 1979) and consequently produce psychological distress, regardless of whether the information is insufficient or the excess of details is confusing (Tversky & Kahneman, 1974). This makes the decision process more complex and selection becomes difficult for a consumer (Bettman et al., 2008 ; Lurie, 2004). As customers proceed with whatever is left of the purchasing procedure, they may feel that the distress or disharmony discussed above is growing. Some researchers (Festinger, 1957 ; Sweeney, Hausknecht, & Soutar, 2000) observed that dissonance has two types : (a) cognitive dissonance that deals mainly with cognition and the cognition of individuals about themselves ; (b) the emotional dissonance makes decision making a painful task for the customer. Sweeney et al. (2000) also cited that cognitive dissonance in purchase decision making has two dimensions. One is “buying wisdom” and the other is “concern about the deal.”

According to Solomon et al. (2006), Cooper (2007), and Lake (2009), cognitive dissonance is a duality in which individuals discover that their dispositions are not quite the same as reality or possibly feel that way. The human mind is complicated and resists change. Humans do not like instability because it leads to a disturbed mind. This, in turn, allures humans to make an easy choice which may not be fruitful to them (Chen, 2011 ; Cooper, 2007). The more prominent the insecurity, the more notable the disturbance (Cooper, 2007). Every time customers make a buying decision, they often have a certain degree of cognitive dissonance (Chen, 2011). In consumer behaviour, the dissonance is fundamentally seen as a process that happens in the post – purchase stage. Once the purchase is over, customers look for real performance and an underperformance leads to a feeling of duality or mental distress (Lake, 2009 ; Solomon et al., 2006). In many cases, to reduce the inconvenience caused, shoppers are engulfed with irrational thoughts and activities or heuristics (Cappelletti, Güth, & Ploner, 2011 ; Lake, 2009) and this can end in purchaser's regret.

This cerebral distress (cognitive dissonance) happens chiefly during a buy with high involvement products (Chen, 2011 ; Kotler, 2001; Solomon et al., 2006). Pei (2013) stated that the degree of cognitive dissonance depends to a huge degree on the significance of the choice, the engaging quality, and the number of accessible

choices, and also on the similarity between the choices. However, Gbadamosi (2009) found that cognitive dissonance can be seen in the purchase of low-investment products. His research demonstrated the inescapability of cognitive dissonance in buying decisions.

Another essential point to consider is that cerebral distress is a point of reference of satisfaction (Chen, 2011 ; Lake, 2009 ; Park, Cho, & Rao, 2012 ; Shao & Shao, 2011 ; Solomon et al., 2006). High dissonance level can cause disappointment (Cooper, 2007; Lake, 2009) and the lessening of dissonance can counteract disappointment and support contentment and spur the individual to justify the choice and diminish dissonance (Cooper, 2007). When shoppers encounter mental distress and don't discover anything available to them to support the choice, without knowing it, they can put themselves in the category of “mistake making individuals” (Robbins & Judge, 2009). For example, according to the literature, several means are adopted to reduce consumers' cognitive dissonance such as increasing communication after the purchase and reducing the anxiety of the person responsible for making decisions (Chen, 2011). Also, when shoppers are optimistic, they are cold hearted to mental distress (Pei, 2013). In some cases, buyers change their states of mind to lessen cognitive dissonance.

Methodology

Sample and Data

The population for the study comprised of mobile phone users. The sample survey was conducted through personal interviews with mobile phone users and data were collected during May – August 2019. The respondents were contacted via e-mails and other social media portals like Facebook using snowball sampling and 310 respondents were identified. Out of 310 responses, 302 responses were accepted. The data collected across the demographics are shown in Table 1. A note to make here is that all respondents had at least one purchase experience of a mobile phone. Statistical analyses were performed using SPSS version 23.0. The frequencies and percentages for categorical variables were calculated. Age was grouped in different cohorts (1 = 18 – 29, 2 = 30 – 49, 3 = 50 – 64, 4 = 65 years and above), gender was dichotomized (1 = Male, 2 = Female) and likewise, occupation was coded (1 = Student, 2 = Salaried employee, 3 = Housewife, and 4 = Businessman/ woman).

Instrument & Measurement

Based on the literature review, the questionnaire was designed. The questionnaire was divided into two sections. In the Section 2, respondents were asked to answer descriptive information about their demographic profile which included age, gender, occupation, and monthly income. In Section 1, five multiple-choice questions were asked on Internet usage and on already developed and validated scale of brand trust (Delgado – Ballester, 2004) and cognitive dissonance (Sweeney et al., 2000). In the section, 5-point Likert scale statements were framed where 1 denoted “*completely disagree*” and 5 denoted “*completely agree*”. PROCESS macro analysis was conducted to examine and test hypotheses about how mechanisms vary as a function of context or individual differences. Moderation model 1 deduced from PROCESS macro by Hayes (2012) was used to analyze the interaction of moderator and independent variable and the outcome is a positive effect.

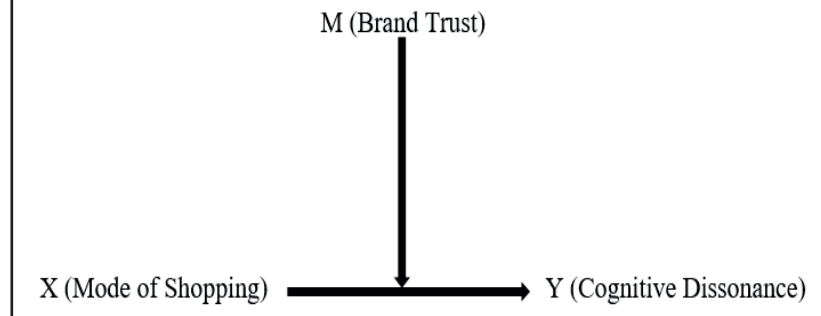
Test of Reliability

The eight item Brand Trust Scale was administered to test the reliability. Cronbach's alpha value is 0.902, which indicates that the scale is reliable to study (Table 1).

Table 1. Reliability Statistics

Cronbach's Alpha	N of Items
.902	30

Figure 1. Conceptual Framework of Brand Trust as a Moderator



Moderation

A moderator is a variable that indicates conditions under which a given indicator is identified with a result. The moderator explains 'when' a direct variable and an indirect variable are associated. Moderation suggests a communication impact, where presenting a directing variable alters the course or magnitude of the connection between two factors (Quynh, 2019).

Regular linear regression and PROCESS macro were used to assess the effects of a moderating variable. To test the moderation, the interaction effect between *X* (mode of shopping) and *M* (brand trust) was checked to analyze whether such an effect is significant in predicting *Y* (cognitive dissonance). Figure 1 demonstrates brand trust as a moderator.

Composite Score

In this study, Brand Trust Scale (BTS) is used. It was developed and validated by Delgado –Ballester (2004). It is an 8-item construct scale, which was used in the present study's questionnaire. The same Brand Trust Scale and composite analysis were used to create a new variable and score.

Similarly, Cognitive Dissonance Scale (CDS), which is a 21-item scale construct (Sweeney et al., 2000) and a new variable with a name of CD was introduced. This composite score helped in computing the hypothesis through PROCESS macro.

The two scales namely, Brand Trust Scale (BTS) and Cognitive Dissonance Scale (CDS) were standardized. As a result, two new composite variables representing a standardized score of BTS and CDS scales were generated and named as ZBTS and ZCDS, respectively. The mode of shopping was also standardized to yield moderation results.

Analysis and Results

Sample Characteristics

Table 2 illustrates the sociodemographic characteristics of online shoppers for 143 respondents. The mean age of participants was 28 years, with the majority being of the younger age group, that is, 18 – 29 years old (65.4%),

Table 2. Sociodemographic Profile of Participants (N = 143) for Online Shoppers

		Frequency	%
Age	18 – 29 years old	94	65.7
	30 – 49 years old	47	32.9
	50 – 64 years old	2	1.4
Occupation	Student	60	42
	Salaried employee	69	48.3
	Housewife	7	4.9
	Businessman/woman	7	4.9
Monthly Income (in INR)	Less than 25,000	51	35.7
	25,000 – 45,000	48	33.6
	45,000 – 65,000	21	14.7
	45,000 – 65,000	5	3.5
	45,000 – 65,000	18	12.6
Gender	Male	88	61.5
	Female	55	38.5

where female respondents were 38.5% and male respondents were 61.5 %. A majority of the participants were from the middle-income group, that is, earning less than INR 25,000 per month and between INR 25,000 – 45,000, constituting 35.7% and 33.6%, respectively of the total income group. The salaried employees and students contributed to 48.3% and 42%, respectively as the highest percentage drivers in occupation.

Table 3 shows the respondents' sociodemographic characteristics of in-store shoppers for 159 respondents. The mean age of participants was 28 years, with the majority being from the younger age group, that is, 18 – 29 years old (67.3%), where female respondents were 36.5% and male respondents were 63.5 %. Most of the participants were from the middle-income group, that is, earning less than INR 25,000 and between INR 25,000 – 45,000,

Table 3. Sociodemographic Profile of Participants (N = 159) for In-Store Shoppers

		Frequency	%
Age	18 – 29 years old	107	67.3
	30 – 49 years old	47	29.6
	50 – 64 years old	5	3.1
Occupation	Student	72	45.3
	Salaried employee	65	40.9
	Housewife	8	5
	Businessman/woman	14	8.8
Monthly Income	Less than 25,000	39	24.5
	25,000 – 45,000	42	26.4
	45,000 – 65,000	25	15.7
	45,000 – 65,000	14	8.8
	45,000 – 65,000	39	24.5
Gender	Male	101	63.5
	Female	58	36.5

constituting 24.5% and 26.4%, respectively of the total income group. Majority of the participants were either salaried employees or students, who contributed to 40.9% and 45.3%, respectively. The results show that most respondents preferred shopping using their cell phones from brick and mortar stores than online. A salaried employee usually prefers shopping using a cell phone from in-store.

Moderation Effect of Brand Trust

A series of analysis were conducted to test the first hypothesis on the moderating effect of brand trust on online vs offline shoppers and its impact on cognitive dissonance. The overall model does demonstrate the moderating effect as there is a significant association between cognitive dissonance and mode of shopping interaction with brand trust ($p < 0.05$). Thus, the complete model shows a strong significant association of variables (Table 4). Overall, Model : $F(3, 253) = 10.44$, $P = 0.000$, $P < .005$, $R^2 = .077$.

Table 4. Model Summary

<i>R</i>	<i>R-sq</i>	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>P</i>
0.4811	0.2315	0.7763	29.9152	3	298	0.000

The results of Table 5 show that the mode of shopping has an inverse and a meaningful association with cognitive dissonance. Let, say, "*b*" be the slope, $b = -0.1884$, $t(298) = -3.7097$, $P = 0.0002$, $P < 0.05$, which means for every unit increase in shopping, there will be the corresponding decrease of 0.188 in the level of cognitive dissonance.

For Brand Trust Scale, $b = -0.3963$, $t(298) = -7.7863$, $p = 0.000$, which means there is a strong significant and inverse relationship of brand trust alone with cognitive dissonance as the p - value is less than 0.05. This signifies that when brand trust goes up by 1, cognitive dissonance goes down by 0.39. In other words, when brand trust goes down by 1, cognitive dissonance goes up by 0.39. Certainly, because of trust, cell phone users in India feel less amount of cognitive dissonance in any kind of shopping mode.

Table 5. Results from PROCESS Macro Testing of Brand Trust Moderation Model

	<i>Coeff</i>	<i>Se</i>	<i>t</i>	<i>p</i>	<i>LLCI</i>	<i>ULCI</i>
Constant	0.0017	0.0507	0.0331	0.9736	-0.0981	0.1015
Mode of Shopping	-0.1884	0.0508	-3.7097	0.0002	-0.2883	-0.0885
Brand Trust	-0.3963	0.0509	-7.7863	0.000	-0.4965	-0.2961
Interaction	-0.2235	0.0512	-4.3678	0.000	-0.3242	-0.1228
Mode (×) Trust						

The results shown in Table 6 show the interaction (moderation) effect. Here, the $F(298) = 19.0774$, $P = 0.000$, $R^2 = .05$. This indicates that the interaction level is strongly significant and inverse. Thus, the hypothesis H1 is accepted. The strength and impact level of brand trust and mode of shopping interaction on cognitive dissonance is highly significant. This also shows that the moderator has altering effects on the strength of the independent and dependent variable relationship. This implies that as a consumer shops in a physical store or an online store, it decreases the cognitive dissonance level when moderated by the retail brand trust.

As the interaction results are significant, Table 7 shows the condition of moderator wherein the interaction results are effectively significant. Level of moderator, that is, the low, medium, and high magnitude of brand trust

Table 6. Test(s) for Interaction

Interaction	$R^2\text{-chng}$	F	$df1$	$df2$	p
X*W (Mode of Shopping × Brand Trust)	0.0492	19.0774	1	298	0.000

Table 7. Conditional Effect at the Values of the Moderator

ZBTS	Effect	se	t	P	LLCI	ULCI
-0.9567	0.0254	0.0706	0.3597	0.7193	-0.1135	0.1643
-0.2704	-0.128	0.0527	-2.4304	0.0157	-0.2316	-0.0243
1.4453	-0.5114	0.0896	-5.7041	0.000	-0.6878	-0.3349

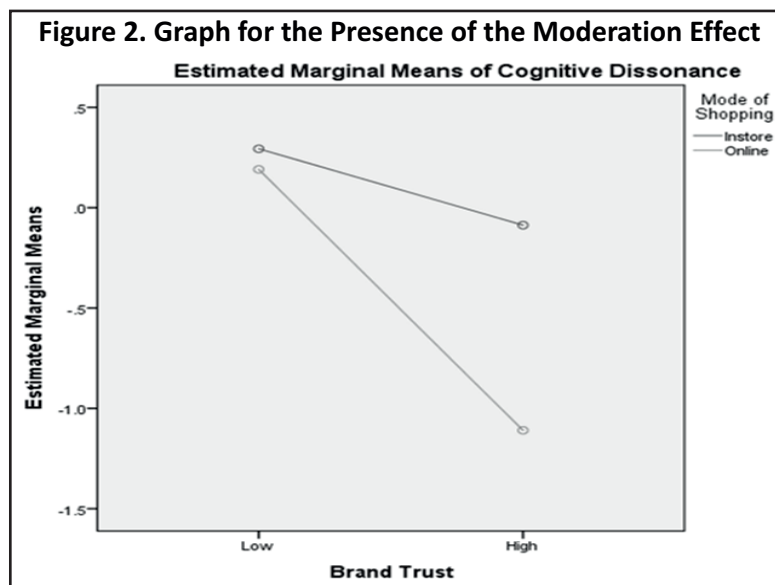
is shown in Table 5 sequentially. It depicts the slopes for the mode of shopping predicting cognitive dissonance at each level of brand trust (moderator).

For low brand trust, mode of shopping [$b = 0.0254$, $t(298) = 0.3105$, $p = 0.7193$] implies that there is no relationship between mode of shopping and cognitive dissonance. For the average brand trust, mode of shopping [$b = -0.128$, $t(298) = -2.4304$, $p = 0.0157$] indicates a significant relationship, which means for a customer with a medium brand trust level, unit mode of shopping gives -0.128 trust level on cognitive dissonance.

For high brand trust level, mode of shopping [$b = -0.5114$, $t(298) = -5.7041$, $p = 0.000$] signifies a customer who has a high level of brand trust, and every mode of shopping gives -0.511 trust level on cognitive dissonance.

In other words, brand trust as a construct of online vs offline shoppers can significantly reduce cognitive dissonance in the users of cell phones.

Figure 2 depicts the significant interaction effect and the main effect of brand trust and mode of shopping on cognitive dissonance. The results of the study are in accordance with the postulated hypothesis. The study finds that there is a significant moderation effect of brand trust on the mode of shopping and cognitive dissonance. This indicates that brand trust does influence the direction of the relationship between mode of shopping and cognitive dissonance.



Conclusion

Store brand trust and identity is extremely important. The shared value that a consumer experiences in offline and online stores helps in maintaining a relationship with the customer. It is crucial as it separates store originality from its competitors. Regardless of whether it is a long-lasting client or a first-time experience, setting up and keeping up the trust is important for the long establishment of any retail business.

The study concludes that when brand trust is low, cognitive dissonance is high in both online and offline shopping. On the contrary, when brand trust is high, cognitive dissonance is relatively lower in the case of both online and offline shopping. Comparing online and offline shopping, cognitive dissonance is lower in offline shopping as compared to online shopping and it is independent of brand trust. This implies that regardless of brand trust (low or high), cognitive dissonance is always comparatively lower in offline shopping as compared to online shopping. The findings also conclude that the mode of shopping significantly impacts cognitive dissonance. The study also accomplishes that brand trust has a significant moderating role in the mode of shopping and cognitive dissonance. When consumers purchase a high involvement product from a store (online or offline), they may experience dissonance. The dissonance may get stronger if the customer is unable to find value in his/her purchase experience. In such a situation, brand trust is instrumental in reducing dissonance.

Implications

Theoretical Implications

The study reexplores and revalidates the two primary scales used for the measurement of brand trust and cognitive dissonance among mobile phone users in India. Thus, the study establishes the generalizability of brand trust and cognitive dissonance scales across product categories and cultural differences in various geographical markets. This study empirically validates and reaffirms the interrelationship among three constructs : mode of shopping (online vs. offline), brand trust, and cognitive dissonance. The original findings of the study which establish the moderating role of brand trust between mode of shopping (online vs. offline) and cognitive dissonance establish that brand trust accentuates the impact of mode of shopping on cognitive dissonance.

Managerial Implications

The findings of the study have many productive implications for managers. When the purchase of a high involvement product is concerned, consumers are very sensitive. They are not looking for repeat purchase, but are more interested in what retail brands can provide (comfort and satisfaction level). Since a crucial finding of the study is that there is a direct impact of brand trust on the post-purchase dissonance, the need for the marketing managers is to focus on enhancing the brand trust of their respective stores (online and offline). As a result, it will spread a positive word of mouth and brand loyalty can be achieved. This has far-reaching consequences in effectively reducing dissonance.

Limitations of the Study and Scope for Further Research

The study is based on brand trust, mode of shopping (online and offline), and cognitive dissonance. The responses can differ from place to place and from time to time. Moreover, the study is restricted to just one product category, that is, mobile phones. Further, studies across categories at different places over time can be undertaken for more generalized conclusions.

Also, the Brand Trust Scale (BTS) and Cognitive Dissonance Scale (CDS) developed by Delgado – Ballester (2004) and Sweeney et al. (2000), respectively are validated, but the scales can be tailor-made as per Indian target audiences. Future studies can focus on customizing the scale with regard to Indian consumers.

Hyper niche areas within the mode of shopping like browsers, researchers, bargain hunters can also be studied in future research studies. Furthermore, this perspective can also potentially advocate the role of brand trust and cognitive dissonance.

Authors' Contribution

Dr. Vivek Singh Tomar conceptualized the idea well-grounded from the theory and developed the research design. He along with Dr. Rohit Singh Tomar planned the research methodology and performed the analytic calculations. Dr. Varsha Khattri identified important studies related to the topic, filtered the important elements from those studies, and recorded these in the literature review section. This aided a robust questionnaire design and scale measurements. Dr. Vivek Singh Tomar and Dr. Rohit Singh Tomar carried out the implementation of the research and verified the numerical results of the study. Dr. Varsha Khattri transcribed the results, conclusions, implications, and scope of the research. All authors provided instrumental feedback to the research that helped shape the theory, methodology, analysis, and the overall sections of the manuscript.

Conflict of Interest

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest, or non-financial interest in the subject matter, or materials discussed in this manuscript.

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