



Understanding the impact of Demographics on Post-purchase Cognitive dissonance

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Abstract

A study was conducted to examine the impact of demographics (age and gender) and product's price on cognitive dissonance among customers purchasing smartphones. Customers were segmented on basis of levels of dissonance felt and then analysis was done to measure how age, gender and product's price varies among different dissonance groups. Results showed that as compared to old customers, young customers were more prone to dissonance and males displayed a great tendency than females to intolerant to dissonance quite often. Moreover, price of product does showed its effect on level of dissonance for which high priced products were linked to high dissonance group more sharply as the lesser priced products to the low and moderate dissonance group.

Keywords: Cognitive dissonance, Clusters, Demographics, Disruption, Psychological state.

Introduction

Cognitive dissonance, originally proposed by Festinger¹ in 1957, has been regarded as an undisputed concept in consumer psychology research. Festinger¹ identified 'dissonance' as a psychological uncomfortable state of mind if the two elements in his/her cognition (feelings, desires) are inconsistent. Cognitive dissonance may be an outcome when our cognitions and actions direct us towards different directions. Since the person assumes both cognitions to be true, it raises stress in their mind motivating the individual to make consonance in their uneven cognitions thereby bringing harmony to their psychological state. Dissonance may arise by three means-First, logical inconsistencies can raise dissonance. Moreover, dissonance can be experienced whenever there is discrepancy between someone attitude and subsequent behaviour or between his behaviours. Third, dissonance can also be experienced upon disconfirmation of a previously held expectation. Furthermore, the more substantive the matter and more discrepancy felt between the attitude and behaviour, the more the relative amount of dissonance.

Evidences showed the presence of dissonance in the pre-purchase stage of decision making process also as depicted by Koller and Salzberger². This arousal of dissonance was explained due to the foregone competitor's product benefits that could have taken if purchased those products. Moreover, the dissonance could also be aroused when the perceived value of the product is disconfirmed after making a purchase. This generally leads to a state of mind known as cognitive dissonance that motivates an individual to get rid of induced discomfort psychological state. The resulting discomfort motivates the individual to dilute the tension already developed by some

manner. This theory was proposed as one of the social psychology's significant theories known as the Theory of Cognitive dissonance¹. Cognitive dissonance may be influenced by several factors-personal or impersonal. As dissonance experience is a psychological one, therefore it is imperative to understand the important personal factors that could shape the intensity of dissonance in an individual. Consequently, this study was undertaken to target the underlined demographic dimensions that could have an impact on origin of dissonance in individuals that ultimately affect the post purchase behaviour. Pandey et al.³ emphasised the role of time and product involvement to the customers for which dissonance decreases over a period over time and high the involvement of product and high would be the dissonance associated with it.

Review of Literature: It is a general notion that customers evaluate the value of products after the purchase and determine the value produced from them. A human mind by and large evaluates the features of product that have been purchase and starts evaluating them with the expectations made before purchase and with the foregone competitor's offering benefits. These cognitions continue to strike in the consumer's mind, ailing him/her to reconsider the purchase just made whether it was a wise or pathetic decision⁴. Customers after purchasing a product generally thinks about the pros and cons associated with them and their cognitions tend to force them to think again and again to their choice of decision. These beliefs get stronger when there exists a disruption between their expectation and disconfirmation. This might affect the patronage behaviour of customers in the long run as the already held unpleasant experience of the customer with the product and retail outlet would be treated as an important input for further purchase. When the inconsistencies are experienced by buyers, they feel

dissatisfied and subsequently make changes in their attitude or behaviour to reduce the dissonance and gain harmony.

Koller and Salzberger² investigated the tourist in all stages of consumer decision making and deduct a result that dissonance has its significant role to play in pre-purchase also. Moreover, the previous experiences with the product also form the foundation of dissonance before purchasing the same product again. More the disruption between expectations and prior experience more would be the dissonance. Westbrook and Newman⁵ concluded that high involvement products generally leads to dissonance due to a great amount of time invested on them before final purchase. Moreover, Keaveney *et al.*⁶ found that buyers who frequently switch brands feel more dissonance than others who generally don't. Researchers also signified the role of emotions in predicting cognitive dissonance and used emotions as an important construct in their studies^{7,8}.

Objectives of the study: Various research questions were arising before the researcher that needs attention to solve the problems of marketers in the today's dynamic world. i. Does dissonance is more in males more than females or vice versa?. ii. Does dissonance exists more in low age group customers or vice versa or no relationship exists?. iii. Also, does products' price impacts the amount of dissonance a consumer experience?

This research tends to find the answer about whether demographic characteristics (age, gender) of a buyer can have an impact on the dissonance experienced after making a purchase. The relationship between a buyer making a purchase and the respective display of post consumption behaviour poses a thorough responsibility to the marketers to understand the behaviour of consumers about how would they behave. Therefore, this research tried to fix the impact of personal characteristics on dissonance and also has tried to give recommendations to the marketers that would help them to devise strategies for their products.

Hypotheses Proposed for the research: For clarifying the objectives of research, certain hypotheses were proposed. Recent studies in social psychology have observed the comparative cognitive style of judging and rationalising the things in terms of gender. It is being noticed that men show a great tendency to cognitive distortions and anger than females^{9,10}. Also, when caught in dissonance, they are better equipped to detail the reasons behind the dissonance¹¹.

H₀1: There is no significant difference in dissonance experience among customers in terms of gender. Furthermore, recent studies focused the buying behaviour of young consumers-their needs and expectations and concluded that young consumers are characterised by ever increasing expectations, higher end needs and distrust. To meet those needs, they are highly involved in buying process and show sophisticated behaviour leading to high tendency to grip in dissonance¹². Whereas older people are

characterised by more faith and expecting the way as things comes to them.

H₀2: There is no significant difference in dissonance experience among customers in terms of age. Also, product's price as an important factor to be discussed considering arise of dissonance post purchase. It is a general notion that products having high price are high involvement products and customers find themselves in rigorous decision making rather than for low priced products. Therefore null hypothesis can be formulated as:

H₀3: There is no significant difference in price of product purchased and dissonance experience among customers. The conceptual framework of the study can be framed as below:

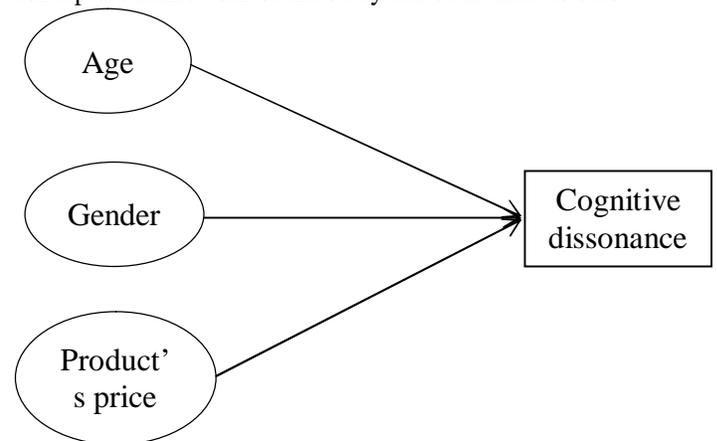


Figure-1
Conceptual Framework of the study

Research Methodology

The study examined the different characteristics of consumer behaviour in their durable purchases. Respondents who purchase smart phones were contacted and questionnaires were filled. In this regard, respondents were tracked at the point of purchase to which appropriate compensation was provided to some respondents by a lucky draw in respective cities in north India (JandK, U.P and Uttarakhand). The final respondents participated in the study were 252 who have purchased smart phones. The research instrument, questionnaire, was constructed based on the former work done on similar studies. The dimension of cognitive dissonance was measured on a 7 point semantic differential scale posited by Sweeney *et al.*⁷. Further, analysis was performed in SPSS 21 for hypothesis testing.

Data Analysis

Scale Reliability: Self-administered questionnaire was used in the study to measure the level of cognitive dissonance observed among customers and the impact of demographic characteristics (age, gender) and product's price on it. Cognitive dissonance scale, given by Sweeney *et al.*⁷ was adapted and dissonance was measured. Three underlying constructs of dissonance were measured-Emotional dissonance, wisdom of purchase and

Concern over the deal. The overall reliability of the questionnaire was measure by Cronbach's alpha, an internal consistency measure, which provides information about the degree of relatedness among items taken in a questionnaire. A greater value of Cronbach's alpha is often preferred as demonstration that the items would evaluate precisely an underlying construct. Happily, the overall value of Cronbach's alpha was found out to be 0.989 as shown in the Table-1 below:

Each dimension of cognitive dissonance showed great reliability of scale as all dimensions have values more than 0.9. Therefore, it can be deducted that the scale generated is fit for further analysis of the data.

Sample Characteristics: The data comprises the various sample characteristics as shown in the Table-2 below which depicts various dimensions of gender, age and price of smart phone purchased by customer. As per gender, 63.9% were the males and 36.1% were the females. In age category, 22.6% belong to relatively young age group of 20-30 years than others. Most (38.5%) customers were of 30-40 years age group while 25.4% were 40-50 years category and 13.5% were of more than 50 years age group. Most of customers (33.7%) purchased smart phones of less than Rs. 8,000 followed by 32.5% who bought

smart phones ranges between Rs. 8,000- Rs. 16,000 price category. 23.4% respondents bought smart phones between Rs. 16,000-24,000 price range and rest (10.3%) of respondents purchase smart phones priced more than Rs. 24,000.

Hypotheses Testing: The hypotheses were subjected to statistical tests so that an appropriate conclusion could be reached. Firstly, groups were subjected to measure the impact of price of product purchased on various dissonance groups for that chi square test was performed to check the results as shown in the table below. The chi square value at df=6 found out to be 20.691 with p value of .002 which signified that the null hypothesis was rejected.

Also, the study measured the impact of gender on various identified dissonance groups (Table-4) for which chi square value at df=2 found out to be 7.728 with a p value of .021 (less than .05) which signifies that null hypothesis is rejected.

Furthermore, impact of age on various dissonance groups was also assessed (Table-5). The chi square value for df=6 found out to be 13.127 and a p value of .041 (less than .05) show that the null hypothesis is rejected.

Table-1
Reliability Statistics

Dimensions of Cognitive dissonance	Examples of few Items used	Cronbach's Alpha
Emotional Dissonance (ED) (13 items used)	I was in despair I resented it I felt disappointed with myself	0.984
Wisdom of Purchase (WOP) (4 items used)	I wonder if I really need this product Perhaps I should have spent my money on something else	0.948
Concern over the deal (COD) (3 items used)	After I bought this product I wondered if I'd been fooled I would like to undo my decision	0.903

Table-2
Sample Descriptives

Sample Variables	Items	Frequency	Mean
Gender	Male	161 (63.9%)	1.3611
	Female	91 (36.1%)	
Age	20-30 years	57 (22.6%)	2.2976
	30-40 years	97 (38.5%)	
	40-50 years	64 (25.4%)	
	>50 years	34 (13.5%)	
Price of Product (Smartphone) purchased	<Rs. 8,000	85 (33.7%)	2.1032
	Rs. 8,000-Rs. 16,000	82 (32.5%)	
	Rs. 16,000-Rs. 24,000	59 (23.4%)	
	>Rs. 24,000	26 (10.3%)	

Table-3
Chi square test

Price of the product * Dissonance Groups Cross tabulation					
Price of the product		Dissonance groups			Total
		Low dissonance group	Moderate dissonance group	High dissonance group	
	<Rs. 8,000	39	29	17	85
	Rs. 8,000-Rs. 16,000	31	32	19	82
	Rs. 16,000-Rs. 24,000	14	26	19	59
	>Rs. 24,000	6	5	15	26
Total		90	92	70	252

Note: $\chi^2 = 20.691$, p value = .002 (less than .05)

Table-4
Chi square test

Gender * Dissonance group Cross tabulation					
Gender		Dissonance Groups			Total
		Low dissonance group	Moderate dissonance group	High dissonance group	
	Male	51	56	54	161
	Female	39	36	16	91
Total		90	92	70	252

Note: $\chi^2 = 7.728$, p value = .021 (less than .05)

Table-5
Chi square test

Age (in years) * Dissonance groups Cross tabulation					
Age (in years)		Dissonance groups			Total
		Low dissonance group	Moderate dissonance group	High dissonance group	
	20-30 years	22	24	27	73
	30-30 years	33	38	29	100
	40-50 years	20	24	11	55
	>50 years	15	6	3	24
Total		90	92	70	252

Note: $\chi^2 = 13.127$, p value = .041 (less than .05)

Results and Discussion

The study poised to measure the various dimensions of cognitive dissonance in a population and clustered them into groups: low dissonance group (n=90), moderate dissonance group (n=92) and high dissonance group (n=70). The identified clusters (dissonance groups) intend to homogenous individually a heterogeneous in comparison to one another. The study checked the impact of demographic characteristics (age and gender) and price of product purchase on origin of different clusters identified in a population. Price of product purchase purchased showed a significant relationship with the dissonance groups implying more the price of the product (smartphone), more would be the dissonance experienced as depicted from the table which shows that approximately 58% of customers purchasing smartphone in the price range of above Rs. 24,000 were subjected high dissonance as compared to mere 20% included in the high dissonance group who purchased smartphones in the price range of less than Rs. 8,000. This may be attributed to the reason that buying a high price smartphone demands rigorous decision making and high involvement which automatically leads to association of emotions, cognitive evaluation of product by the customers. Subject to threat to any of the above components would have led to develop dissonance among the customers. Moreover, in smartphones category, technology is growing very fast and customers feels themselves cheated for paying a handsome price for their products if they have to feel out-dated in social settings after only few months of product purchase.

Moreover, the gender showed a significant relationship with the various dissonance groups identified. Males were more prevalent in the high dissonance group category as compared to females. This might be due to the reason that still in male dominant Indian society; males have the responsibility of earning finance for the family and females in most instances works in a supportive role. Also, males have more tendencies to cognitive distortions than the females. Therefore, the study showed in line with the previous held studies that males seem to be more vulnerable to dissonance than females.

Furthermore, the study tested the impact of age on dissonance and found significant results. This might be the reason that smartphone industry is catching up advancement very fast and population in all age groups are entitled to purchase smartphone in any price range. Thus, the young customers are more informative and furious than the older age people for that if they don't get the exact benefits that have been expected before making a purchase thereby leading to high dissonance among them.

Scope of further Research: Although the research has contributed in great deal in understanding the underlying dimensions and nature of cognitive dissonance yet it was not refrained from a few limitations. Firstly, the study was undertaken in few outlets in the mentioned areas with a small

sample and therefore, generalizing the findings to whole population of country might not be appropriate. The reason for this execution was due to budgetary constraints that forced researcher to stick to few outlets and small sample size. Furthermore, the research conducted was restricted to smartphone industry and therefore it might not again to extrapolate the finding to other industry. This act as a scope of future research for scholars to examine the role of demographics in arousing dissonance among other industries and settings as well. Also, it would be very beneficial if further research establish relationship of relative value of customers present in different dissonance groups leading to gain a better view of customers to the marketers.

Conclusion

Consumer psychology has been the centre of attraction for researchers all over the world. Various factors have shown to mark the impact of dissonance on cognitive dissonance. But research pertaining to classifying the consumers on the basis of dissonance experienced by dissonance have been rarely discussed¹³. Therefore, the study intended to measure the interplay of cognitive dissonance among customers purchasing smartphones and tried to elicit the underlying groups into three clusters displaying specific characteristics. Moreover, the present research attempted to improve the knowledge of dissonance in this direction by testing the impact of demographic variables on these identified dissonance groups. Gender and age groups among customers found have significant effect on dissonance groups. Moreover, price of the product purchased also observed to induce an impact on various dissonance levels experienced by customers thereby accepting the preconceptions by Oliver^{14,15}. These results would definitely help to devise strategies by the marketers to put a firm check on the customers. Customer engagement and retention strategies are an imperative part of any organisation and dissonance could put a strong motivator for customers to make their purchases in slightly different way that mostly lead to a loss. Therefore, this study has implications for marketers to mould the strategies more towards the young population than focusing more on old customers.

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