

Attitude as a Mediator between Cognitive Dissonance and Intention to Repurchase a Product

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Doi:10.5901/mjss.2015.v6n5s2p133

Abstract

The aim of this research is to test the mediation role of attitude toward purchasing electronic goods between cognitive dissonance and intention to repurchase the electronic goods in the future. The respondents are the buyers of various electronic goods in several shopping malls in Jakarta and surrounding areas. Using structural equation modeling with LISREL 8.80 software, partial mediation role of attitude is empirically confirmed between cognitive dissonance and intention to repurchase. Recommendations are presented at the end of the research.

Keywords: Cognitive dissonance, attitude toward purchasing, intention to repurchase, electronic goods

1. Introduction

Buyers may have inadequate knowledge about the product to be bought. The logical consequence is that the buyers may experience cognitive dissonance after buying and using the product. Accordingly, cognitive dissonance theory (CDT) has been applied in the consumer behavior context (Kaish, 1967; Hunt, 1970; Cummings & Venkatesan, 1976; Oliver, 1997; Soutar & Sweeney, 2003; Sweeney, Hausknecht, and Soutar, 2000; Keng & Liao, 2009). Tsiros and Mittal (2000), for example, developed a cognitive dissonance model after buying a product. They identified consequences of the cognitive dissonance after purchasing a product as a pleasure level achieved after the purchasing, i.e., satisfaction after purchase, intention to repurchase, and intention to complain. Keng and Liao (2009), then, added an external information search as a mediating variable.

According to CDT (Festinger, 1957 in Mittelstaedt, 1969), cognitive dissonance will influence attitude toward a product. Then, based on the theory of reasoned action (TRA) (Fishbein & Ajzen, 1975) and theory of planned behavior (TPB) (Ajzen, 2005), which is a development of the TRA, attitude will affect the intention to repurchase the same products in the future.

In cell phones context, Sharifi and Esfidani (2014) found that consumers with less cognitive dissonance are more satisfied and they also have higher behavioral and attitudinal loyalty. Additionally, they confirmed that trust and cognitive dissonance mediate relationship between satisfaction and loyalty. In another research it found that cognitive dissonance may occur for low involvement goods purchase (Nordvall, 2014).

Accordingly, Tan and Chin (2015) used emotional dissonance rather than cognitive dissonance in context of smartphone users. They found that high involvement has no significant effect on emotional dissonance and product return intention. Whereas, barrier to switch has significant on emotional dissonance, but no significant effect on product return intention. They also concluded that opportunistic customers have a significant effect on emotional dissonance and it forms product return intentions.

Even though, research about mediation role of cognitive dissonance between attitude and intention is still rare. This study aims to develop a different model based on the CDT (Festinger, 1957 in Mittelstaedt, 1969), TRA (Fishbein & Ajzen, 1975, 1980) and TPB (Ajzen, 1991, 2005). The model consists of cognitive dissonance as an antecedent, attitude toward purchasing product as a mediator, and intention to repurchase a product as a consequence.

2. Theoretical Foundations

2.1 Cognitive dissonance

CDT (Festinger, 1957 in Taylor, Peplau, & Sears, 2006) focuses on inconsistencies between attitude and behavior. According to Taylor, Peplau, and Sears (2006: 138), "Dissonance is defined as an aversive motivational state that results

when we engage in some behavior that is inconsistent with our attitudes." The definition suggests that dissonance is an inconsistent result between behavior and attitude. The inconsistency is generated when behavior and attitude are not in harmony, for example, consumers consider that the product purchased is unable to satisfy their needs (Jaccard & Blanton, 2005 in Jaccard & Blanton, 2005). In this case, the purchase of and attitude toward a product do not conform to his expectations. The inconsistency may lead to something that is not fun for anyone that he is motivated to avoid it through certain actions. According to Aronson (1968 in Taylor, Peplau, & Sears, 2006), people will be in a very disturbing dissonance if there is an inconsistency between behavior and attitude that is very important for them.

According to Festinger (1957 in Soutar & Sweeney, 2003), people will be in a dissonant state if two elements of their cognition (i.e., in the their knowledge, behavior, feelings, desires, or the knowledge of the world) are not consistent. Cognitive dissonance may occur if the opinion is formed or decision is made when cognition and opinion steer people in a different direction. Festinger (1957 in Soutar & Sweeney, 2003) also refers it as an emotional conceptualization, which shows that, for some people, dissonance is very painful and intolerable.

In CDT (Festinger, 1957 in Olson & Stone, 2005), there are predictions that people will experience psychological discomfort if they freely choose to perform behaviors that lead to negative consequences that may be anticipated or contrary to the views that they extremely support.

In order the cognitive dissonance may occur, three conditions are necessary, i.e. the decision to purchase a product should be important for the consumer, the decision may not be changed, and the decision is voluntary (Cummings & Venkatesan, 1976; Oliver, 1997; Soutar & Sweeney, 2003). Soutar and Sweeney also stated that the dissonance typically occurs in purchasing durable goods.

According to CDT (Festinger, 1957 in Morgan *et al.*, 1986), people are assumed to strive for achieving harmony of the elements of their cognitive structure or their mind. If the elements are not in harmony, they will be in discomfort and will feel motivated to make the elements become in harmonious consonance.

Dissonance may occur in many conditions. According to Festinger (1957 in Morgan *et al.*, 1986), two cognitive elements will be dissonant if the elements are incompatible with each other because both deviate from one's general logic or expectation. The amount of dissonance itself depends on the interests of a person about the elements and against which the elements do not fit.

Dissonance creates psychological stress and negative feelings (Harmon-Jones, 2000 in Taylor, Peplau, & Sears, 2006), and consequently, people feel obliged to reduce or eliminate the dissonance. Dissonance reduction is intended to create consistency, or the so-called consonance.

One's behavior after receiving a message may show rejection when the message is contrary to the message that has been adopted by someone. According to CDT (Albarracín, Cohen, Kumkale, 2003), one who realizes that he has voluntarily behave in contrary to the implications of a persuasive message (support), he may feel disturbed and rationalize his behavior. Thus, the stronger the original recommendations contradict with his behavior, the better the rationalization that must be developed to support it in order cognition and behavior to be consistent.

2.2 Attitude

Many definitions of attitude have been proposed by experts. The definition used in this study is based on TRA and TPB, i.e. attitude towards the behavior. According to Ajzen (1991: 188), attitude towards behavior "... refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question." It means that attitude towards behavior is the result of evaluation carried out in the form of like (favorable) or dislike (unfavorable).

Most social psychologists use cognitive or information-processing approach to explain the formation of attitudes (Ajzen, 2005). This approach is used by Fishbein and Ajzen (1975 in Ajzen, 2005) in the development of a model-value expectation about attitudes. According to this model, attitudes logically evolve from beliefs about the attitude object. In general, beliefs about the attitude object relate to certain attributes, such as objects, characteristics, or other events. In terms of the attitudes towards buying behavior, each belief is related to a particular outcome of the behavior, or other attributes such as negative consequences of buying behavior. If consumers positively or negatively assess the attributes, then the attributes will automatically and simultaneously form his attitude.

People perform certain behaviors if they believe that the behaviors have very wanted consequences. They also form negative attitudes toward behaviors that generate highly undesirable results. Particularly, subjective values embraced by the people directly contribute to that attitude. The subjective values are proportional to the strength of the belief, namely, a subjective probability that the behavior will lead to the anticipated results. Associated with behavior as an object of attitude, Ajzen and Fishbein (1980: 56) specifically stated that "Note that the attitude specifically refers to the person's own performance of the behavior rather than to its performance in general."

In certain contexts, the definition of attitude refers to a tripartite view that includes three components, i.e. cognition, affection, and conation. In the TRA and TPB, attitude only includes affective component. It may be seen from the statement of Fishbein and Ajzen (1975: 12) that "We have already reserved the term 'attitude' for one of these categories items, namely, affect." Thus, all affective responses are categorized as attitudes, including satisfaction. This is one thing that distinguishes this study from other studies (e.g., Tsiros & Mittal, 2000; Keng & Liao, 2009), which is already included in the concept of satisfaction attitude. In addition, behavior that may be observed, or known also as an overt behavior, is not included in the conative component (Ajzen, 2005).

From the above description, it may be seen that the attitude towards behavior is an affective evaluation that supports or does not support the behavior.

2.3 *Intention to be loyal*

According to Ajzen (1991: 181), "Intentions are assumed to capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior." So, intention is the motivation of people to do something. Motivation itself is indicated by the hard work and a plan to be able to do something. Accordingly, Fishbein and Ajzen (1975: 12) also stated that ". . . , the strength of an intention is indicated by the person's subjective probability that he will perform the behavior in question."

Based on the above descriptions, intention may be seen as a motivation to work hard and an effort that may be expressed in the form of subjective probability.

2.4 *Cognitive dissonance and attitude*

Festinger (1957 in Soutar & Sweeney, 2003) stated that dissonance may influence the decision-making process. In the consumer behavior context, dissonance potentially influences customer's attitudes and satisfaction about his decision to buy. Accordingly, it may be known that cognitive dissonance after purchase may negatively influence outcome of the evaluation after purchasing a product (Hunt, 1970; Mittelstaedt, 1969; O'Neil & Palmer, 2004; Soutar & Sweeney, 2003).

There are three ways to achieve consonance (Festinger, 1957 in Jaccard & Blanton, 2005). One, changing people's behavior even though it is often not feasible (Taylor, Peplau, & Sears, 2006). Two, people may try to make as if dissonance is not important so that they do not have to change their attitude (Simon, Greenberg, & Brehm, 1995 in Taylor, Peplau, & Sears, 2006). Three, the most commonly used method, people resolve dissonance between attitudes and behavior by changing their attitude. One of the ways to reduce the discomfort is to change attitudes so that it is consistent with past behavior, which creates a justification for the behavior and therefore reduces the discomfort associated with the past behavior (Olson & Stone, 2005).

Sweeney, Soutar and Johnson (1996) found that cognitive dissonance is associated with dissatisfaction (attitude). Soutar and Sweeney (2003), O'Neil and Palmer (2004) and Keng and Liao (2009) also found that cognitive dissonance negatively influences customers' satisfaction (attitude) after purchasing a product.

2.5 *Attitude and intention*

According to Fishbein and Ajzen (1975: 59), attitude relates to behavioral intention about an object. Accordingly, Ajzen and Fishbein (1980) stated that intention may include elements of action, target, context, and time which are very general or very specific. From the theoretical point of view, it does not distinguish how specific or general the intentions are. Generality of intention degree is determined by behavioral criteria as an object. When using attitude to predict and understand the intention, it is important to make sure that attitude and intention are related to one another. Testing empirically the relation between attitude and intention, Ajzen (2005) stated that a large number of researches have resulted in strong support for proposition that intention to perform a behavior may be predicted from attitudes toward the behavior.

In the consumer behavior context, Olson and Stone (2005), for example, stated that the new and positive attitudes will positively influence intention to buy in ways with which a person has engaged in acts that cause psychological discomfort. According to them, it does not need to happen if the behavior reinforces attitudes that may increase behavioral consistency.

Many researches have been done about the relationship between attitudes (satisfaction) and intention to repurchase a product. Oliver (1980), for example, found a positive correlation between satisfaction and intention to buy. Richins (1983), Tsiros and Mittal (2000), Schiffman and Kanuk (2004), Huang and Chang (2008) and Keng and Liao

(2009) also found that satisfaction (attitude) positively affects the intention to buy.

2.6 Cognitive dissonance, attitude and intention

According to the self perception theory (Bem, 1965, 1967 in Albarracín, Cohen & Kumkale, 2003), when asked to state his preference, a person may infer his intentions based on implications of behavior that occur and are important to him at that time. Moreover, when people choose to engage in a behavior that is triggered by a message, they might then infer that the message was contradictory. So, the message recipient may resolve the conflict between the message - that recommends avoidance of a behavior - and subsequent deviation by predicting that the message was classified as weak or distorted.

Brehm (1966 in Albarracín, Cohen & Kumkale, 2003) said that someone who is asked not to engage in certain actions and that he should perform other actions may develop weaker intentions to do the recommendations in the future than those who do not accept the recommendations strongly embraced by the message.

Accordingly, Tsiros and Mittal (2000) said that the intention to repurchase a product is the possibility of a customer to continuously use the product again. Mittelstaedt (1969) showed that cognitive dissonance negatively influences the intention to repurchase a product. Hunt (1970) also found a negative correlation between cognitive dissonance and intention to repurchase a product.

In the context of customers' intention to complain, the intention refers to the possibility of consumers to complain to the store / seller manufacturers, other consumers, or stores / other manufacturers after purchase (Zeithaml, Berry & Parasuraman, 1996). Accordingly, Soutar and Sweeney (2003) found a negative correlation between cognitive dissonance and intention to complain. Cognitive dissonance negatively influences intention to repurchase (Tsiros & Mittal, 2000; Keng & Liao, 2009).

3. Frame of Thinking and Hypothesis

The attitude of people is formed through their experiences, including behavior. Behavior that produces something uncomfortable (cognitive dissonance) may influence attitude to perform a certain behavior. Under such a framework, the following hypothesis is formulated.

H1: cognitive dissonance is a negative predictor of attitude.

People with a positive attitude toward an object may indicate that they like the object; and *vice versa*. It means that they will be intent to do something based on results of the pleasant or unpleasant situation from the behavior. If the result is a pleasant situation, they would intent to create the situation; and *vice versa*. Under such a framework, the following hypothesis is formulated.

H2: attitude is a positive predictor of intention.

Referring to the frame of thinking that is used as a basis for formulating the H1 and H2, the next hypothesis is formulated.

H3: attitude partially mediates the association between cognitive dissonance and intentions.

The three hypotheses are displayed in Figure 1.

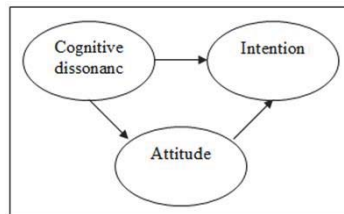


Figure 1. Theoretical Model

4. Method

4.1 Sample

The population of this study was the consumers of various electronic goods in several shopping malls in Jakarta and surrounding areas. The convenient sampling was used to select the sample.

Determination of sample size was based on the analytical technique used in this study, namely Structural Equation Modeling (SEM). According to Boomsma (1987 in Arbuckle, 1997), the size of the sample for SEM is at least 200. The sample size of this study is 243.

4.2 Measures

All variables in the study were measured by the modified Likert scale with 10 alternative responses and using scores from 1 to 10 (Allen & Rao, 2000). Response options move from strongly disagree to strongly agree. There are 6 items to measure cognitive dissonance, 5 items to measure attitude and 5 items to measure intention (see Appendix).

All items measuring the three constructs were submitted to confirmatory factor analysis (CFA) using LISREL 8.80. The model is significant (chi-square = 232.10; $p < 0.000$), which is not surprising considering that the chi-square values tend to be inflated with large sample sizes (Schumacker & Lomax, 1996; Jöreskog & Sörbom, 1996). Alternative fit indices, however, suggested that the model fits the data well. The comparative fit index (CFI) is 0.96, the root mean square error of approximation (RMSEA) is 0.083, the goodness-of-fit index (GFI) is 0.89, and the adjusted goodness-of-fit index (AGFI) is 0.84. Based on Hu and Bentler's (1999) recommendations, CFI and RMSEA are good. GFI and AGFI are very close to their recommendation, i.e. 0.90.

The convergent validity was assessed by standardized loadings factor and average variance extracted (AVE). As shown in Table 1, except item number 1 of cognitive dissonance, all of the factor loadings are significant and range from 0.61 to 0.87, well above Nunnally and Bernstein's (1994) suggested cutoff of 0.4. All of the AVEs exceed the recommended level of 0.50 (Fornell and Larcker 1981). Therefore, the convergent validity has been established.

The discriminant validity was assessed by comparing the AVEs of all individual constructs with the shared variance (i.e., the squared correlations) between all possible pairs of constructs (Fornell and Larcker 1981). As shown in Table 1, all the AVEs are greater than the shared variance, indicating that all multi-item scales display adequate discriminant validity.

Reliability was assessed by coefficients of items reliability (R^2) (Jöreskog & Sörbom, 1996) and constructs reliability in terms of coefficient alphas and composite reliabilities (CR). As shown in Table 1, all R^2 s are greater than 0.4 (Bagozzi & Baumgartner, 1994). The coefficient alpha estimates, ranging from 0.83 to 0.91, are all greater than the cutoff point of 0.70 as suggested by Nunnally and Bernstein (1994 in Hou & Elliot, 2010). Composite reliabilities, ranging from 0.84 to 0.91, are all greater than the cutoff 0.70 as suggested by Bagozzi and Yi (1988).

Table 1. Results of Confirmatory Factor Analysis

Measurement Scales	Standardized Loadings	t	Average Variance Extracted	Average Variance Shared (Highest)	R^2	Coefficient Alpha	Composite Reliability
Cognitive Dissonance			0.51	0.51 (0.24)		0.83	0.84
X2.	0.75	-			0.56		
X3.	0.67	11.05			0.45		
X4.	0.72	12.17			0.52		
X5.	0.61	9.83			0.38		
X6.	0.80	13.93			0.64		
Attitude			0.64	0.64 (0.24)		0.90	0.90
X7.	0.77	-			0.60		
X8.	0.69	11.01			0/47		
X9.	0.78	12.81			0.61		
X10.	0.87	14.52			0.75		
X11.	0.87	14.62			0.76		
Intention			0.67	0.67 (0.17)		0.91	0.91
X12.	0.70	-			0.48		
X13.	0.85	12.28			0.73		
X14.	0.86	12.40			0.75		
X15.	0.86	12.31			0.73		
X16.	0.81	11.72			0.66		

In summary, the findings from assessing the psychometric properties indicate that the measures used in this study are acceptable in terms of reliability and validity. It means that the data may be used to test hypothesis of this research.

5. Results and Discussion

5.1 Descriptive statistics.

The total number of respondents is 243 people. The average age of respondents is 19.95 years. There are 129 women (53.1 percent) and 114 men (46.9 percent). The products are 222 mobile phones, 12 notebooks, and 9 other products. The result of empirical structural equation model is displayed in Figure 2. The fitness indices of the model are evaluated above.

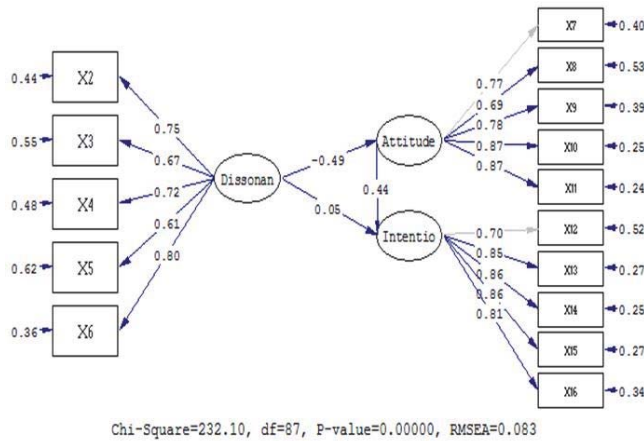


Figure 2. Empirical Model

All correlation coefficients among variables (Table 2) are significant. The correlation coefficient between intention and cognitive dissonance is -0.17. The coefficient of determination is 0.03. It means that 3 percent of intention may be explained by cognitive dissonance.

Table 2. Coefficients of Correlations among Variables

	Dissonance	Attitude	Intention
Dissonance	1.00	-0.49**	-0.17*
Attitude	-0.49**	1.00	0.41**
Intention	-0.17*	0.41**	1.00
**. Correlation is significant at the 0.01 level (1-tailed).			
*. Correlation is significant at the 0.05 level (1-tailed).			

The correlation coefficient between attitude and cognitive dissonance is -0.49. The sign (negative) is consistent with H1. The coefficient of determination is 0.24. It means that 24 percent of attitude may be explained by dissonance.

The total effect of cognitive dissonance on attitude is -0.49 (t-value = -6.75). The sign (negative) of the path coefficient (total effect) is consistent with H1. Moreover, it is significant. It is also consistent with the previous studies conducted by Sweeney, Soutar, and Johnson (1996), Soutar & Sweeney (2003), O’Neil & Palmer (2004) and Keng and Liao (2009) that cognitive dissonance has a negative effect on attitude.

The correlation coefficient between intention and attitude is 0.41. The sign (positive) is consistent with H2. The coefficient of determination is 0.17. It means that 17 percent of intention may be explained by attitude.

The total effect of attitude on intention is 0.44 (t value = 5.05). The sign (positive) is consistent with H2. Moreover, it is significant. It is also consistent with the previous studies conducted by Oliver (1980), Richins (1983), Tsiros and Mittal (2000), Schiffman & Kanuk (2004), Huang and Chang (2008) and Keng and Liao (2009).

The multiple correlation coefficient between cognitive dissonance, attitude and intention is 0.37. The coefficient of determination is 0.137. It means that 13.7 percent of intention may be explained by cognitive dissonance and attitude.

The indirect effect of cognitive dissonance on intention through attitude is -0.21 (t value = -4.21). It is significant and supports H3. Moreover, the total effect of cognitive dissonance on intention is -0.17 (t-value = -2.29), which is significant. These results are consistent with results of the previous studies conducted by Zeithaml, Berry, and Parasuraman (1996), Soutar & Sweeney (2003), Tsiros and Mittal (2000) and Keng and Liao (2009). It means that attitude has no absolute mediation role between cognitive dissonance and intention. It is reinforced by the results of this study which shows that the difference between the path coefficient (-0.17) and the indirect path coefficient (-0.21) is 0.05 (rounding) with t-value = 0.58 which is not significant. So, although attitude has a mediating role, but the role of mediation is not absolute. In other words, the relationship between cognitive dissonance and intention is indirect.

6. Conclusions

From the results of the research and discussion presented above, there are several conclusions. One, the relation between cognitive dissonance and attitude is negative. The greater the cognitive dissonance experienced by consumers in buying a product at an earlier time, the smaller the attitude towards the purchase of the product. Conversely, the smaller the cognitive dissonance experienced by consumers in buying a product at an earlier time, the greater their attitude towards the purchase of the product.

Two, the attitude of consumers towards the purchase of a product in the past may determine the intention to buy the product again in the future. The more positive the attitude towards the purchase of a product in the past, the stronger the intention to buy the product again in the future. Conversely, the more negative the attitude towards the purchase of a product in the past will decrease the intention to buy the product again in the future.

Three, the attitude of consumers towards the purchase of a product mediates the relationship between cognitive dissonance and intention to repurchase the product. The mediating effect of attitude is partial, not absolute. In other words, cognitive dissonance may negatively and directly relate to intention to repurchase a product but the relationship may also be mediated by the attitude of consumers towards purchasing the product.

7. Limitations and Future Researches

The implication of the above results to the marketers of electronic products is to reduce cognitive dissonance that may be experienced by the consumers. It may be done, for example, by providing a complete and honest information about the product being marketed. By providing written information accompanied by an adequate explanation, cognitive dissonance can be minimized. Thus, the attitude of consumers towards purchasing a product is expected to be positive. The logical consequence is that consumers are expected to have the intention to repurchase the product in the future when they need it.

One weakness of this study is that the study was not conducted in an appropriate succession. Actually, cognitive dissonance should be measured first and then attitude, and finally intention. So, the causal effect between the variables should not be applied. For future research studies, it is important to successively measure the three variables.

Another recommendation for future researches is that external validity should be increased. For example, it may include more products and other countries.

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Appendix

Cognitive Dissonance

- X1 Seller might not provide the information I need about the product.
- X2 I felt regret having bought the product.
- X3 I felt a rush to buy the product.
- X4 I should put off the purchase of the product.
- X5 I felt difficulty regarding the product.
- X6 The product I bought did not fit with what I thought of before.

Attitude

- X7 Purchasing the product was an enjoyable experience.
- X8 Purchasing the product was a valuable experience.
- X9 I liked purchasing the product.
- X10 Purchasing the product was a good experience.
- X11 Purchase products was a happy experience.

Intention to Repurchase

- X12 If I am still in need of similar products, I would buy the product again.
- X13 I prioritize purchasing the products that anymore than other similar products.
- X14 I will try to find the product to satisfy my needs in the future.
- X15 In the future, I will use the product again.
- X16 Although even more difficult to get it, I would prefer that product than similar products to satisfy my needs in the future.