Direct Effect of Situational Factors on Attitude Structure (Cognitive, Affective and Conative) of Organic Customers in Indonesia: Structural Equation Model Application

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ABSTRACT

Effect of situational factors on consumer attitude has been studied by various experts in consumer behavior field. However, the direct effects on structure of attitudes (cognitive, affective and conative) still do not exist. This study aim is to determine the direct effect of situational factors on cognitive, affective and conative attitude of organic consumers in Indonesia. Research instrument was developed by pilot study. This study uses Internet-based online survey to collects 310 samples data of organic products customers in Indonesia. Hypothesis is tested by structural equation modeling (SEM). Research results showed that situational factors have a significant effect on cognitive, affective, and conative attitude. These results provide two benefits. First benefit is to science of consumer behavior. To better understand how the consumers attitude, it must understand how cognitive, affective and conative reaction to surrounding environment. Second benefit is to science of marketing communications. Consumer should be directed to an attitude or certain actions to communicate situational factors relevant to appropriate response. For example, cognitive responses more emphasis on rationality, affective response emphasizes on emotional and conative response emphasizes on expectations or the switching cost. This study provides a valuable contribution to science of consumer behavior and psychology in general, because there is no researcher to connect directly situational factors and three attitude components (cognitive, affective and conative). Further research can be directed to effect on consumer behavior.

INTRODUCTION

Majority of agricultural commodities, especially fruits and vegetables produced through intensification of agricultural systems approach, can decrease the level of health and food safety due to excess usage of chemical pesticides and inorganic fertilizers. This condition encourages producer (Cranfield, Henson, and Holliday, 2009; Falguera, Aiguier, & Falguera, 2012; Mutlu, 2007; AP Rimal, Moon, & Balasubramanian, 2005; Tzouramani, Sintori, Liotakis, Karanikolas, & Alexopoulos, 2011) and consumer (Canavari, Bazzani, Spadoni, & Regazzi, 2002; Chakrabarti, 2010; Davies, Titterington, and Cochrane, 1995; Mutlu, 2007; Paul and Rana, 2012) seek to find healthier and safer food product alternatives.

The reality of agricultural products conditions above are situational factors that may affect on consumer attitudes to organic agricultural products. Many research results revealed that situational factors have a significant effect on consumer’s attitudes to organic products (First & Brozina 2009; Klöckner & Ohms 2009; Muralidharan, 2006; Mutlu, 2007; Padel & Foster, 2005). On other hand, it also needs to understand the effect of situational factors on structure of attitudes (cognitive, affective and conative). Therefore, to get a clearer understanding of organic consumer attitudes, it needs to understand the effect of situational factors. But until now there has been no research to examine the direct effect of situational factors and structure of attitudes (cognitive, affective and conative) to understand of how the real situational factors may affect on attitudes.

Researchers may more interested to assess the consumer based on behavior rather than attitudes with regard to effect of situational factors. Belk (1975) describes that to understand consumer characteristics individually in explaining buying behavior patterns creates many study to test effect of situational factors on behavior. A number of
empirical researches have revealed the direct effect of situational factors on behavior. The situationism considers that behavior is depend on situation (Punj & Stewart, 1983), so that situational factors change can cause behavior patterns changes. Roslow et al., (2000) proved the differences in consumer spending patterns between the two seasons that occur in Cyprus city. Similarly, Nicholls et al., (1996) shows the differences in spending patterns in associated with situational variables among consumers in India and in US. Indeed, differences in behavior patterns are caused by attitudes changes in relation with situational factors and it also due to behavior as a function of attitude.

Attitude consists of several components as cognitive, affective, and conative. Dick and Basu (1994) introduced the framework in which the loyalty of relative attitude is affected by cognitive, affective and conative. Then Oliver (1999) introduced that loyal behavior is preceded by four components of attitude, namely cognitive loyalty, affective loyalty, conative loyalty, and action loyalty. Therefore, it is important to understand the attitudes based on three components.

**Problem Statement:**
Starting from the loyalty conceptual framework from Dick and Basu (1994), the situational variable becomes moderator variable for causal relationship between relative attitude and repeat patronage (repeat buying). This study does not puts situational factors as a moderator variable for causal relationship but rather as one determinant of cognitive, affective and conative attitude. Researchers of consumer behavior do not directly measure the effect on attitude components (cognitive, affective and conative). Cognitive relates with individual’s belief to specific object (product/brand) based on information received, affective relates to feelings towards a product or brand and conative relates to condition of behavioral intention.

This study aim is to determine the direct effect of situational variables on attitudes components (cognitive, affective and conative). The questions are below.
1. Is there a direct effect of situational factors on cognitive variable?
2. Is there a direct effect of situational factors affective variable?
3. Is there a direct effect of situational factors on conative variable?

**Theoretical Review And Hypotheses Formulation:**
Marketing study of situational variables has been carried out for more than 4 decades by some researchers. They are brand preference (Sandell, 1968), buying patterns (Belk, 1974), attitude toward the brand (Bearden & Woodsdie, 1976), brand choice (Miller & Ginter, 1979), consumption pattern (Hornik, 1982), fish consumption (Leek, Maddock, and Foxall, 2000), recycling behavior (Latif, Omar, Bidin, and Awang, 2012), consumer channel (Chocarro, Cortinas, and Villanueva, 2013) and brand image beliefs (Batra & Homer, 2004).

Situation term in consumer research is used inconsistently by several researchers (Belk, 1974). Definition of situational factors are explained by (Belk, 1974) “as all those factors particular to a time and place of observation which do not follow from knowledge of personal (intra-individual) and stimulus (choice alternative) attributes, and which have a demonstrable and systematic effect on current behavior. This means that situational factors have a systematic effect on buying behavior of organic products, which are unhealthy air conditions, amount of pesticides residues and chemical fertilizers contained in conventional agricultural products have led to deterioration of public health. Latif et al. (2012) explains the definition of situational variables from Ajzen (1991) as the ease or difficulty of performing the behaviour. Furthermore, situational factors are defined as a particular personal situation with regard to behavior context (as provision of services), individual characteristics (as sociodemographic) and individual knowledge and experience of behavior (Barr, 2007). People are more affected by situational variables than nature Internal (characteristics) (Krahe, 1992).

Situational effect in this study context is the lack of information in relation to pollution and environmental damage and agricultural products that are unhealthy and unsafe for consumption thereby affecting consumer attitudes (Cranfield et al., 2009). Phenomenon of environment pollution of water, soil and air, and also in agricultural output due to chemical fertilizers and pesticides usage are situational factors to affect on behavior to choose food products.

**Definition of three attitude components:**
Psychologically attitude consists of three dimensions below.
1. Cognitive dimension. This dimension relates to mental processes of perception, conception, and beliefs about the object attitude (García-Santillan, Moreno-García, Carlos-Castro, Zamudio-Abdala, and Garduño-Treo, 2012). Lavidge and Steiner (1961) suggest that realm of cognitive dimension includes the intellectual, mental and rationality. Theory asserts that a person has a certain cognitive elements from his knowledge, his environment, his attitude, his opinions and behavior (Oshikawa, 1969). Furthermore, Shapiro and Bonham (1973) defines cognitive as the process to receive information from an individual about certain events, processing them through a system of belief and generating conclusions about what has happened and what should be done in future.
2. The affective dimension. This dimension involves feelings or emotions, like or dislike about the object attitude.

3. Conative dimension. This is a tendency to perform certain actions or intention to perform an action on object attitude.

**Effect of Situational Factors on Cognitive:**

Berger & Mitchell (1989) conclude from the research results that repeated advertising situation can affect on beliefs and attitudes accessibility. Hornik (1982) also concludes that situation can cause cognitive processes to generate options for leisure activities. Based on above theoretical explanation, the hypothesis 1 is explained below.

Hypothesis 1: Situational factors have a positive effect on cognitive.

**Effect of situational factors on Affective:**

Affective condition of a person is strongly affected by surrounding circumstances. Emotion, mood, and satisfaction of a person to an object can change quickly if the situation also changes. Miller & Ginter (1979) quotes a proposition on Mehrabian-Russell Theory that situational factors may cause emotional responses (affective), and ultimately the individual’s behavior. Furthermore, Park, Stoel, and Lennon (2008) states that "In shopping situation, consumers mood may affect on their intention to shop or purchase products". This means that situation factor in a shop can affect on mood (affective) that further affects on goodwill (conative) consumers to buy or not to buy a product. Based on above theoretical explanation, the hypothesis 2 is explained below.

Hypothesis 2: Situational factors have a positive effect on affective.

**Effect of situational factors on Conative:**

Person-situation interactionist model from Trevino (1986) about the interaction between individual disposition and situational factors have been well accepted in study of business ethics (Ross & Robertson, 2003). They said that although personal factors can have a major factor on decision making of salesperson, they can also have the interactive effect of situational factors on decision making. On other hand, situational variables significantly may better explain variation intention to behave towards some particular brand (Bearden & Woodside, 1976). Based on above theoretical explanation, the hypothesis 3 is explained below.

Hypothesis 3: Situational factors have a positive effect on conative.

Structure of overall model of this study can be seen in Figure 1.

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**Research Methods:**

**Data Collection:**

Data were collected through Internet-based online survey to company in Indonesia. Sampling frame of this study is respondents of online company survey. The sampling technique used is using quota sampling technique to sets the total sample of 310 respondents. Respondent’s criteria to become samples are below.

1. Respondent has purchased the organic products at least 3 times
2. Products purchased are devoted to fruits or vegetables.

**Measurement:**

The procedure to measure the variables is done through literature study and then develop a research instrument (questionnaire) using a seven pointy Likert scale, from 1 = strongly disagree and 7 = strongly agree). Padel and Foster (2005) present the results of a survey conducted by Soil Association, that reason consumers buy organic products is because of following considerations: 1) without chemicals/additives/pesticides; 2) better for environment; 3) health for personal/family; 4) better taste, and 5) are free of genetic modification. These are the reasons of situational factors as problems of conventional agricultural products as mentioned above.

Dick and Basu (1994) are used as reference to measure the cognitive, affective and conative variables. Cognitive is operationalized through four indicators (Accessibility, Confidence, and centrality, and clarity). Cognitive is operationalized through 4 indicators (emotion, mood, primary Affect, satisfaction). Connative Cognitive is operationalized through 3 indicators (switching costs, sunk costs and expectation).

**Pilot Study:**

Questionnaires were distributed to a small group of respondents for a pilot study base for online survey. Then it conducted measurement models for each latent variable through confirmatory Factor Analysis (CFA) test to know amount of factor loading of each indicator. Cronbach's alpha, composite reliability and variance are extracted for each latent variable. Operationalization at this stage is done with SPSS 16 and Amos 20 and. If the result
of this process is suitable with expectation, then the questionnaire is considered worthy to distribute to all respondents.

The pilot study is conducted twice for base-line survey of respondent company. First, estimation was done to 50 respondents and having analyzed the indicator turns Q3 below the standard value so that loading expected Q3 indicator restored. Second pilot study was conducted by online survey to 33 respondents. Results of both pilot study are shown in Table 1. Estimated CFA shows all items standardized loading are significant and above the cutoff value of 0.4 (Nunnally & Bernstein, 1994). In terms of model fit criteria, most situational factors construct do not meet the criteria for models fit, except CMIN/DF as less than 0.5 (Taylor & Todd, 1995). In cognitive constructs, AGFI criterion does not fit because the value is less than 0.90, whereas affective and conative construct meet the fit model criteria.

Table 1: Standardized loading, Model Fit, Construct Reliability, Cronbach's Alpha and Variance Extracted.

<table>
<thead>
<tr>
<th>Item</th>
<th>Standardized item loading</th>
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<tbody>
<tr>
<td></td>
<td>Situational Factors</td>
</tr>
<tr>
<td>Q1</td>
<td>0.660</td>
</tr>
<tr>
<td>Q2</td>
<td>0.792</td>
</tr>
<tr>
<td>Q3</td>
<td>0.873</td>
</tr>
<tr>
<td>Q4</td>
<td>0.673</td>
</tr>
<tr>
<td>Q5</td>
<td>0.635</td>
</tr>
<tr>
<td>Q11</td>
<td>0.571</td>
</tr>
<tr>
<td>Q12</td>
<td>0.707</td>
</tr>
<tr>
<td>Q13</td>
<td>0.772</td>
</tr>
<tr>
<td>Q14</td>
<td>0.926</td>
</tr>
<tr>
<td>Q15</td>
<td>0.753</td>
</tr>
<tr>
<td>Q16</td>
<td>0.958</td>
</tr>
<tr>
<td>Q17</td>
<td>0.555</td>
</tr>
<tr>
<td>Q18</td>
<td>0.738</td>
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<tr>
<td>Q19</td>
<td></td>
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<tr>
<td>Q20</td>
<td></td>
</tr>
<tr>
<td>Q21</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Model fit, Com. reliability, Var.extract, Cronbach's alpha</td>
</tr>
<tr>
<td>Chi-Square</td>
<td>15.341</td>
</tr>
<tr>
<td>P</td>
<td>0.009</td>
</tr>
<tr>
<td>CMIN/DF</td>
<td>3.068</td>
</tr>
<tr>
<td>GFI</td>
<td>0.856</td>
</tr>
<tr>
<td>AGFI</td>
<td>0.568</td>
</tr>
<tr>
<td>TLI</td>
<td>0.704</td>
</tr>
<tr>
<td>NFI</td>
<td>0.808</td>
</tr>
<tr>
<td>CFI</td>
<td>0.852</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.254</td>
</tr>
<tr>
<td>Composite reliability</td>
<td>0.851</td>
</tr>
<tr>
<td>Variance Extracted</td>
<td>0.536</td>
</tr>
<tr>
<td>Cronbach's alpha</td>
<td>0.835</td>
</tr>
</tbody>
</table>

Constructs reliability are tested to get internal consistency of a latent variable. This study adopts three ways to achieve construct reliability namely composite reliability, Cronbach Alpha, and Average Variance Extracted (AVE). Results showed that Cronbach's alpha for fourth latent variable is above the cutoff value of 0.7 (Nunnally, 1978), while the value composite of reliability also is above the minimum threshold value of 0.6 (Bagozzi & Yi, 1988). Fornell & Larcker (1981) said that latent variables are considered to have reliability of measurement when extracted variance value more than 0.50. Table 1 shows that variance extracted of each latent variables are above 0.50. This means that all indicators are good enough in fifth measure of latent variables.

The estimation at this pilot meets standard loading factor for each indicator, as well as construct reliability of each of latent variables all at level expected. It is concluded that the instrument is feasible and can be forwarded to next stage of questionnaires distribution to 310 respondents to test structural models and hypotheses. Hypotheses test of study are conducted by Structural Equation Modeling (SEM) with Amos 20 program.

RESULTS AND DISCUSSION

Testing the hypothesis:

Structural equation modeling (SEM) is used to test the hypotheses through Amos version 20 software. The estimation results and structural models fit criteria are presented in Table 2. SEM analysis uses Chi-square, CMIN/DF, GFI, AGFI, TLI, NFI, CFI and RMSEA to determine the degree of accuracy of structural models. SEM analysis shows poor model fit to data based on several criteria, except CMIN/DF for less than 5 as recommended by Taylor and Todd (1995). Although the size of model fit criteria can be used to reject the
data, Mueller (1999) suggest an alternative approach to assess the models fit. He said that in order to determine whether the model is built to reflect the data, a model must be tested to find out if the path coefficient has an opposite sign (direction) to theory, the standard error unusually large and negative variance estimation. If one of them happens, then the model does not reflect the existing data. This means that measures fit the criteria mentioned above is not the only rationale to accept or rejecting a structural models. Based on estimates in Table 2, value of all three path coefficient is positive consistent with theory and there are no unusually large standard error values. In addition, the entire estimation variances are positive. Therefore, this structural model can reflect the data. Estimated structural model (standardized) is shown in Figure 2.

**Table 2: Estimation Results of Structural Model.**

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Unstandardized Estimate</th>
<th>Standardized Estimate</th>
<th>Standard Error</th>
<th>C.R.</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>F. Situational -&gt; KGT</td>
<td>1.439</td>
<td>0.903</td>
<td>0.196</td>
<td>7.35</td>
<td>***</td>
</tr>
<tr>
<td>F. Situational -&gt; AFT</td>
<td>1.330</td>
<td>0.978</td>
<td>0.164</td>
<td>8.09</td>
<td>***</td>
</tr>
<tr>
<td>F. Situational -&gt; KNT</td>
<td>1.487</td>
<td>0.960</td>
<td>0.183</td>
<td>8.13</td>
<td>***</td>
</tr>
</tbody>
</table>

Notes: KGT: cognitive; AFT: affective; KNT: conative; *** P < 0.001.

SEM analysis shows that situational factors affect on cognitive with path coefficients (standardized) value of 0.903 and probability value is much lower than alpha (α) 0.05. This means that situational factors affect positively and significantly on cognitive (H1 is proven). The path coefficients of situational factors for affective is 0.978 (standardized) and the probability value is far below the alpha (α) 0.05. This means that situational factors also significantly affect on affective (H2 is proven). Furthermore, effect of situational factors on conative also indicated by low probability value which far below the 0.05 with path coefficient (standardized) is 0.960. This means that situational factors positively affects on conative (H3 is proven).

**Discussion:**

This study result support Berger & Mitchell (1989) that repeated advertising situation can affect on cognitive response (belief). Laroche et al. (2005) reported that store atmosphere (situation) can shape perceptions (the cognitive processes) of consumers. It is clear that situation in certain conditions can affect on cognitive of consumers. Consumers often receive information with respect to conventional agricultural products that tend to be excessive to use fertilizers, pesticides and other additives. It can affect the cognitive domain so that consumers will have strong belief system on alternative products of organic products are healthier and safer. This is consistent with Padel and Foster (2005) and Shepherd et al., (2005) that consumers buy organic products because there are situations where a family member is ill. These factors make consumers tend to be more rational to act and make decisions, especially in terms of food consumption. Consumers already understand very well that use of chemicals as pesticides for agriculture is very harmful for health. This is consistent with conditions of consumer in Geogia, USA where 54% of respondents aware on how serious the problem of pesticide residues found in food for human health (A. Rimal, Fletcher, McWatters, Misra, and Deodhar, 2001). On other hand, consumers consider organic foods have no pesticide residues and lower fertilizer and free from growth hormones (AP Rimal et al., 2005). In addition to effect on human health, organic consumers in Indonesia are also aware that application of conventional farming systems can be detrimental to environment health. Organic consumers in Indonesia have realized that food purchasing decisions should consider the...
environment and social aspects. This condition is also experienced by organic consumers in UK where 61.2 percent of those surveyed agreed that application of bio technology in plants can contribute to improve the environment quality by reducing the chemicals usage. Furthermore, other effects of conventional agricultural products the usage of genetic engineering (genetically modified, GM) which according to respondents the GM agricultural products can be bad for human health. This information has been understood by organic consumers in Indonesia (93.2% of respondents supported the revelation of GM agricultural products can be harmful to health), considering that in some countries such as in Europe has been widely voiced by intense negative effect of GM agricultural products on health (Zechendorf, 1998) and also in several other countries such as USA (Essoussi & Zahaf, 2008). Such situations affect on cognitive processes of Indonesian consumers to buy organic products.

Physical environment (situational factors) affects two internal characteristics within individual as affective and cognitive evaluations (Mehrabian & Russell, 1974). Laroche et al., (2005) found that store atmosphere also can trigger an affective reaction of consumers. Other study show the store atmosphere can evoke an emotional response (Hul, Dube, & Chebat, 1997; Sherman, Mathur, & Smith, 1997). Darden (1983) says that attitude towards the mall environment is more important to affect consumer affective response than his attitude toward merchandise. Direct effect of affective situational factors can occur when consumers make purchasing decisions without knowing more about the features, characteristics, or even the quality of a product. The example is purchase without a plan (unplanned buying) (Turley & Milliman, 2000) and also impulse buying (Mattila and Wirtz, 2001). Unlike with a planned purchase where cognitive factors predominantly experienced by consumers (Sherman et al., 1997), majority of unplanned buying is affected by situational factors. For examples, the store atmosphere or merchandise display can directly affect on consumers emotional state (affective). Several theories show that situational factors indeed directly affect on affective customers. This study support this theory that organic consumer in openness era (situation) and ease to get information relating to various problems in conventional agricultural products, eventually evoke affective response of customers organic (the, high enthusiasm to buy, like dreams taste, and get the satisfaction of organic products). Situational factors can affect the emotional state (affective) of organic consumer, for example to become a loyal customer (Hasnelly & Josep, 2012), increasing the number of items purchased (Sherman et al., 1997) and consumption level of organic products (Lockie, Lyons, Lawrence, & Grice, 2004).

Research results of Latif et al., (2012) revealed that situational factors have significant direct effect on intention (conative) to recycle. The results support some empirical theories, where situational factors have a direct effect on intentions (conative) without having to pass the cognitive and affective. This means that situational factors may raise aspects of switching costs, sunk costs and perceived expectations of consumers. More reports about the negative effect of conventional agricultural products make consumers increasingly reluctant to switch to conventional agricultural products, willing to spend time and money to get organic products, and greater expectations on organic agricultural products. The direct effect of situational factors on conative without passing through cognitive and affective provide a different understanding of some previous researchers who say that relationship patterns of cognitive, affective and conative are hierarchical (Back & Parks, 2003; Lavidge & Steiner, 1961; Oliver, 1999 ; Smith & Swinyard, 1988).

Conclusions, Implications And Further Research Directions:

This study results demonstrate that situational factors can affect on three components of attitude (cognitive, affective and conative) that never researched previously both in general marketing and organic product marketing. These results also succeeded to provide a new understanding that structure of consumer attitudes must not pass through four phases of cognitive, affective, conative then produces a specific behavior. In other words, consumer behavior is not born from a systematic sequence of attitude components, but they are a function of situational factors or depend on situational factors.

The implication for consumer behavior science is to better understand how the attitude leads to a behavior, ie by observing how consumers react to surrounding environment. Implication for science of marketing communications is consumer to be directed to an attitude or certain actions through communication of situational factors relevant to appropriate response. For examples, cognitive responses more emphasis on rationality, affective response more emphasizes on emotional aspects and conative response more emphasizes on expectations or switching cost.

In addition to getting a more clear understanding the determinants to affect cognitive, affective and conative, it is necessary to test other factors such as social norms. Until now, studies on direct effect of social norms on cognitive, affective and conative also never been done.

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McGraw-Hill.


