



PROCEEDING OF International Conference on Green Business and Entrepreneurship

HOTEL SALAK THE HERITAGE, BOGOR, INDONESIA May 6, 2015

Supporting Pertners :











CONSUMER ENVIRONMENTAL AWARENESS FROM THE PERSPECTIVE OF NEW ECOLOGICAL PARADIGM (NEP), ATTITUDE AND BEHAVIOR

Aam Bastaman

Lecturer at Graduate Program of Management Trilogi University, Jakarta a_bastaman@universitas-trilogi.ac.id

ABSTRACT

Consumers play a pivotal role in the efficiency program of energy which supports the environmental friendly consumption for environmental sustainability. The energy generation is very much depends on non-renewable resources which are originated from fossil, such as coal, oil and gas. The fact is that the fossil resource so limited which is predicted will be last in the near decade. The usage of fossil energy is also blamed as the cause of global warming and climate change. But in the other hand, the usage of renewable energy such as wind, solar power, geothermal ocean waves have not been utilized due to several reasons such as the estimated cost is predicted very expensive, capacity factor and technological barrier. The changing in consumer consumption behavior is important to solve or at least to ease the challenge of the scarcity of fossil energy. Now we can see the growing interest to the environmental protection which led to the emergence of new environmental paradigm (NEP).

This research will test using the new environmental paradigm scale to predict the consumer awareness, afterwards to test the degree of relationhip between environmental awareness to the environmental concerns, then to test the influence of environmental awareness to the attitude of energy saving consumption, and finally to test consumer attitude of energy saving consumption to the behavior of energy consumption. Respondents are well educated consumers with minimum master degree holder. This research finds that the degree of high educated consumer environmental awareness based on NEP scale is moderate, but not high. In the meantime, there is no strong relation between environmental awareness and environmental concerns. Consumer's environmental concern has no influence towards attitude of energy saving consumption. Finally, attitude of energy saving consumption influenced the energy consumption behavior, in another words both attitude toward energy consumption and the behavior of energy consumption has strong relationship.

Keywords: Environmental awareness, environmental concerns, new environmental paradigm, attitude of energy saving consumption, and energy saving consumption behavior.

I. Introduction

Background

Dilemma between the usages of fossil energy for present welfare versus the need of conservation long has been discussed. Fossil energy which is non-renewable resources in the past is assumed as abundant, but nowadays is getting scarce, dispite its effect to the environment – pollution caused global warming and climate changing, still current top rank energy source. It is like rivalry between the need to live today versus conservation for future welfare. Unfortunately, technology has not provided a good signal to solve the problem in the future (Peccei and Ikeda, 1988).

Meanwhile, modern society life very much depends on this non-renewable fossil energy, such as coal, oil and gas which is very limited and predicted will be unavailable in a very short time (US EPA Energy Conservation, 1997). It is not just limited in quantity, but fossil energy consumption also has a bad impact to the environment. There has been some efforts to find renewable energy alternatives from wind, water, solar, geothermal, biofuel, and other renewable energy, but unfortunately the development is likely unsatisfactory due to technology limitation, inefficiency and high cost (Yusgiantoro, 2004).

Interest on sustainable energy consumption is very important, as all relate to our live not only at household level but also businesses can not be separated from the usage of the energy. Furthermore, energy plays a pivatol role in the development of national economy and the effort for a better welfare. Therefore, any disruption on the energy power supply will cause damaging effect on economy and people live. Therefore modern life can not be apart from the support of the energy. Energy is the mechine growth in the modern economiy (Reusswig, Lotze-Campen and Gerlinger, 2009).

The biggest challenge for energy saving program is that consumer has not fully understood the usage of energy wisely. One of the factors is that due to low tariff for most energy products (electricity, oil, gas and other non-renewable energy). Contrary, state electricity (PLN) pays more money for producing electricity which is Rp. 2000 per KWh using diesel compared to what it sells to the consumer Rp. 600 per KWh. In another words government via PLN provides huge subsidy of around Rp. 1,400 per KWh for the household electricity consumption (Mochtar,

BUMN Track, 2008). With this condition therefore it is necessary to wake up society awareness that electricity is not a cheap product.

In the other hand, based on earlier study in consumer behavior, electricity energy is a low involvement product, with the routin usage, and in some ways shown inertia factor, and habit plays dominant role in decision process (Watson, Viney and Schomaker, 2002). These characteristics might influence consumer behavior in using/consuming electricity energy.

Onother challenge in energy saving program is that the fact that Indonesians categorized as boros consumers in cosuming electricity compared to other nations. No wonder that the usage of electricity increased sharply from year to years, this does not match with the development rate of electricity power (Kompas, 2009). Therefore, campaign on energy consumption pattern change is very important in the country, although to change consumption pattern is one of the toughest challenges in the effort of environment conservation and sustainable development (United Nations 1992, in McGovern, 2007). The majority of electricity consumption is household consumption (93%), only 7% used for business, industry and offices (PLN, 2010), therefore consumer awareness, concerns and attitude towards the energy consumption issue is very important and very strategic to study. Therefore, focus of the study is on demand side management.

Reasons for this research are due to several research gaps from the previous researches. In the context of pro-environmental consumption, proofs of the previous research findings are inconclusive in nature. They are not clear if environmentally concern which is reflected in attitude is also reflected in daily energy consumption behavior. So far, has not been found any research on the relationship between environmental awareness and environmental concerns and its effect on the attitude and its implication on energy consumption behavior. Previous studies on the effect of the environmental awareness towards pro-environmental behavior are limited on intention only, not on actual consumption behavior. Changing of consumer's consumption behavior is believed as one of the alternative steps which can be contributed by marketing management discipline to adapt the level of supply with the level of demand.

This research study and analyse relationship between environmental awareness and environmental concern in the context of new environmental paradigm, and to test the effect of environmental concern toward the attitude of energy saving consumption, finally to test the attitude of energy saving consumption towards behavior of energy saving consumption.

II. Theoretical Framework

2.1. Environmental Awareness

Natural environmental conservation and protection is a field which attract more interest of decision maker, marketer, consumer and society as a whole (Baker and Sinkula, 2005, Banerjee, Iyer and Kashyap, 2003, Granzin and Oslen, 1991, Menon and Menon 1997, in Grinstein and Nisan, 2009). Research on this field discussed on ways took by the government, business and consumer to develop and protect the environment. It is estimated 30% to 40% of the environmental damage has been caused by private household consumption activities. Therefore, to change consumer behavior can be able to give a substantial effect to the environment (Stern, 1999).

With limitation of non-renewable energy resources on earth, it is important to conserve the currect non-renewable energy resource or in another way consumers are urged to use renewable energy resources so that natural resources can be still available sufficiently for the next generation. Energy conservation also important due to consumption of non-renewable resources has a bad impact on the environment, such air and water pollution (EPA, 2007). Therefore, with the increasing of awareness on the environment (Dunlap, et al, 2000), the messages on environmental communication (such as social advertising) which encourage pro-environmental behavior is expected to get well acceptance from the society.

To solve environmental problem, in many cases, involve certain degree of social change, that is a change in ways where individual and group aim their live with sort of adjustmen. In practice, current efforts are made to make these social change programs work to change bad practices into something more productive and beneficial in the effort to increase human life quality (McGovern, 2007). Social change in the context of communication campaign is an organized effeort by a group (change agent) with the objective to persuade other parties (target groups) to accept, modify, or to neglect certain ideas, attitude, practices and behavior (Kotler and Lee, 2008).

The growing environmental concern has lead to consumer appeal which is demonstrate their concern by their buying decision making on environment friendly product, such as green product. Number of pro-environmenta consumer constantly increase, therefore increasing the

number of population target on pro-environment marketing and demarketing effort on onvironmental based products (Grinstein and Nisan, 2009).

With the growing awareness on environmental conservation, social scientists for decades have investigated motivation of the individuals to involve in pro-environmental behavior (Clark et al, 2003), to get more detail understanding on why people participate in pro-environmental behavior. This understanding is important for decision/policy makers, besides, scientist search for solutions or ways on environmental problems which is beleived need in some ways a change in behavior.

2.2. Environmental Concern in the Context of New Environmental Paradigm

Consumer behavior is a study which involve several process when an individual or group select, buy, use, or dispose post purchase product, ideas, service, experience to satisfy need and want (Solomon, 2007). In the marketing context, study on consumenr behavior has been growing rapidly which indicate the important of understanding on market behavior for marketing program effectivity. The challenge faced by marketers is that human behavior is very complex, consisting veriety of different factors which formed or blocked individual preference, both internally or externally (Egmond and Bruel, 2007), therefore, many factors in forming or blocking individual preference.

In this context shown by Solomon (2007) who argued that one of fundamental premises in the field of modern consumer behavior are people often purchase a product not because of what the product can do, but what it means for them. This principle is not necessary mean that basic function of the product is not important, but the role of product in our live has been extended far beyond task and performance of the product. A deeper meaning of a product can help to differentiate it from others, similar goods and services – overall the same, but people will choose a brand that has an image (even personality) consistent with the underlying need. In another words, consumption is a self expression or symbolic benefit for consumers (Aaker, Berger and Heath 1999, in Grinstein and Nisan, 2009). Consumption has an important role in the conversation about identity, social cohesiveness and cultural meaning. In another hand, consumers often locked in unsustainable consumption pattern through combination of habit, institutional barrier and social norms (Jackson, 2004). This behavior is an important drive on consumer preference and choice. Furthermore, self conception and behavior associated with self

expression depend on certain social role owned by consumers, the degree of importance of the consumer's role and product domain (Aaker 1999 et al, in Grinstein and Nisan, 2009).

Rational choice model argued that we behave in a way to maximize expected benefit for ourselves as individual from our action. Premise of rational model choice explains that human behavior is a continual process to make planned choices among a set of different behavior. Facing with these choices based on rational choice theory human calculated expected benefit and costs from different actions, and choose one offered the highest expected net benefit (Jackson 2004). Futhremore, Jackson argued that rational choice emphasized on individual as unit of analysis. These individuals make choices based on rational consideration consist of individual evaluation and expected subjective result.

There are two approaches in an effort for consumer behavior change to be more proenvironment firstly behavior is perceived as an external function, and second, as an internal factor. Several model of consumer behavior focus on internal antecedent of behavior, such as values, attitude, and intention. The second model focuses more on external factors such as incentives, norms and institutional barriers. Several models are very good in explain ilect merefleksikan pentingnya variabel konstekstual atau situasional, dan sebaliknya (Jackson, 2004).

In the other hands, psychologists concentrate to relate internal psychological variables on behavior. Based on this approach it is found that pro-environmental behavior originated from values, beliefs and attitude that direct individual to certain behavior or action. Therefore, psychologist recognizes that awareness, education, guilty feeling and persuasion as tools to emerge behavioral change.

Concern on energy conservation affects electricity consumption behavior. According to Leiserowitz, Maibach, Roser-Renouf (2008), in total, half of American said that they have done some improvement in energy saving in their houses, meanwhile others intent to do the same thing on the next 12 month. A large number of population said they are going to have some improvement in energy saving at their home, and intend to purchase fuel saving car.

Meanwhile, Dietz, Fitzgerald and Shwom (2005) argued that values influence thought and behavior toward environment. Values help to decide on how to think about choices and what to do. Values don't act solely but together with other factors in shaping decision. The well known

study on value orientation is a research conducted by Dunlap et al (2000) regarding new environmental paradigm. It has been confirmed there are three different value orientations on pro-environmental behavior: biospheric, social (altruistic) and egoistic (Dietz et al, 2005).

New Environmental Paradigme scale so far is the most used and accepted tools to measure environmental concern (high/low). This scale consists of 15 items with 7 points of likert scale, as the original scale. Developed by Dunlap and Van Liere (1978) and then revised by Dunlap et al (2000) has significantly corelated with values, norms, knowledge of climate change and risk perception (Schultz and Zelezny, 1998). In this research will be taken 15 item of questions which is really relevant. The highest score indicates higher environmental concern.

H1: Consumer environmental awareness influences consumer environmental concern

2.3. Energy Saving Attitude

Attitude is generally believed as important factor for marketing because it is assumed has causal relationship among attitude, intention and behavior. Hawkins, Best and Coney (1989), in Hini et al (1995) argued that due to its importance meaning attitude become an important point considered in setting marketing strategy. Even it is said that attitude has been linked directly with behavior change. It is said that behavior change is a function of change on intention to behave, in another case, change on intention relate with change on attitudep (Hini et al, 1995).

Attitude is general evaluation about people (including oneself), object or issues and permanent in nature (Ijzen and Fishbein, 1980; Solomon, 2007). Attitude can be in form of positive or negative feeling associated with specific behavior. According to Ajzen and Fishbein (1980), in general an individual will have favorable attitude toward certain behavior if he believes that the performance of the behavior in general will tend to the positive result. In the other hand, if an individual believe that in general the negative result will occur from the behavior, then he will have negative attitude.

Relationship between attitude and behavior is mediated by intention (Ajzen and Fishbein, 1980). Based on behavioral model intention to behave proposed by Fishbein, in certain situation behavior is the same with intention to behave, where considered in general attitude to perform behavior and subjective norm about behavior. To maximaze relationship between attitude-behavior Ajzen and Fishbein (1980) proposed four requirements to measure attitude: time, action, context and target (TACT).

H2: Consumer environmental concern influences Consumer energy saving consumption attitude

2.4. Energy Consumption Behavior

Consumption has been the front row in the history (Miller 1995, in Jackson, 2004). To question consumption in certain degree means to prevent the history itself. To involve in the effort to change consumption pattern and consumer behavior, in a way means to work with focus and details with fundamental aspect from our social world, and processed without knowing the level of our complexity and its sophistication then it is the same with inviting the unavoidance failure.

In a simple phrase it is said that consumption can be seen as a functional effort to increase individual and collective wellfare by providing goods and services needed to fulfill people needs and wants (Mas-Collel et al, 1995, Begg et al, 2003, in Jackson, 2004). Further more Jackson argued by emphasizing in consumer wants and power in consumer choice economics take utilitarian approach widely to evaluate consumer goods and services. Therefore, consumer behavior is not merely purchasing behavior, some among others such as energy conservation and traveling can be classified as consumer behavior (Jackson, 2004).

Energy saving behaviors refer to some actions which is not very often, but important and significantly reduce household and transportation energy use, such as turn off the light when it is not used, using saving energy light, adjusting thermostart based on wheather condition, etc. (Leiserowitz, Maibach, and Roser-Renouf, 2008).

Therefore, understanding consumer behavior mainstream is prerequisite to understand how to motivate or encourage pro-environmental consumer behavior. Terminology of sustainable consumption relatively new, however debat on consumption, consumer behavior and consumerism have been much longer (Jackson, 2004).

H3: Consumer environmental attitude influences consumer energy consumption behavior

III. Research Methodology

3.1. Research Population and Sample

Research Population is civitas academica STEKPI School of Management (University of Trilogy), consisting of lecturers, employees, graduate school students and parents. Sampling method is based on convenience sampling. This research uses survey design to test relationship among variables. To test participant environmental concern will be used New Environmental Paradigm scale (Dunlap et al, 2000).

3.2. Method of Data Analysis

3.2.1 Descriptive Analysis

This analysis is a description in nature and explanation on respondent characteristics, such as: age, gender, education, status and occupation using SPSS soft ware version 14.

3.2.2 Quantitative Analysis

This analysis is conducted by processing data to be analysed using statistical tools on variables studied, consisted of:

1. Validity Test

Validity test Uji is used to make sure validity items of questions in defining a variable, in another word to test if measurement tools test in the form of question list really measure what it has to be measured. Validity test will be conducted on each item of question, with a mechanism to compare calculated r with r table. Item of question will be assumed valid if calculated r > r table.

2. Reliability

Reliability test is to measure consumer stability and consistency in answering questions in the questionnaire. In this research reliability test is used simultaneously on all question items. Questions are reliable if value of Cronbach alfa > 0.60 (Hair et al., 2006).

3. Correlation test

Correlation test (r test) is used to test correlation (relationship) between two variables which will be stated with correlation coefficient. In this research will be tested direction of relationship and cohesiveness of the relationship between environmental awareness

with environmental concern. The positive relationship will be shown by its significant level (less than 0.05) and correlation coefficient value.

Correlation coefficient value will determine the cohesiveness of correlation, further more correlation cohesiveness will be grouped as follows (Sujarweni, 2007):

- a. 0.00 up to 0.20: correlation has a very week cohesiveness
- b. 0.21 up to 0.40: correlation has a week cohesiveness
- c. 0.41 up to 0.70: correlation has a strong cohesiveness
- d. 0.71 up to 0.99: correlation has a very strong cohesiveness

4. Simple regression test

Simple regression analysis method will be used in this research because relevant with one of research objectives to test emphirical of the effect of environmental concern toward attitude of energy saving consumption, and to test the effect of attitude toward energy consumption behavior.

Decision criterion to determine the effect of independent variable toward dependent variable and cohesiveness of the relationship among variable are determined on significant level based on alfa 0.05, coefficient (B), r test value and R square test results.

3.3. Variable measurements

Variables in this research consisting of: Environmental awareness, Environmental concern, Energy saving consumption attitude and Energy consumption behavior.

Environmental awareness measurement is conducted with two questions delivered on the questioner as indicators, measurement of environmental concern will adopt New Environmental Paradign scale (Dunlap et al 2000), meanwhile energy saving consumption attitude will be measured directly by proposing four questions as indicators. Meanwhile, energy consumption behavior construct measurement is tested by using eight questions as indicator. Variable measurement will be applied in several indicators by using likert scale of 1-7 in form of questioner.

IV. Analysis

4.1. Descriptive Analysis

Descriptive analysis is conducted to 75 respondents involved in this research on relevant characteristics such as age, gender, education and job status.

Respondent"s age mostly between 41-50 years (53%). This is categorized as mature age range, often indicated as wise, experienced and possibly has sense of responsibility toward environment. It can be concluded also that this range of age has to be more responsible on the environmental issues. Menawhile, respondents gender relatively in balance between male (49.3%) and female (50.7%), therefore, it provides description that gender relatively well distributed. There is no indication that gender has caused different behavior toward environment. Respondent level of education is mostly undergraduate (73.3%), master degree (24%) and doctoral degree (2.7%). In gereal respondents are well educated people. This group typically perceived has a broaden view on environment (Jackson, 2004).

4.2. Quantitative Analysis

Quantitative Analysis is conducted to test validity and reliability, to analyse the relationship among variables and to analysis on the influence of one independent variable toward dependent variable.

4.2.1 Validity and Reliability test

Environmental awareness variable: Validity and reliability test are conducted on 30 respondents. All question items for environmental awareness are valid (N=30), indicated by calculated r > r table (0.312) and reliable (Cronbach Alfa 0.77).

Environmental concern variable: Ten items of questions to measure environmental concern variable is valid (N=30), except 5 items are out from questioner because calculated r < r table (0.312). Questions in this questioner refer to new environmental paradigm scale from Dunlap et al (2000). The fact that there are several unvalid questions indicate that this scale likely need sort of adjustment in the context to measure environmental concern in Indonesia. For reliability test indicates all of the respondents answer on all item questions are reliable (Cronbach Alfa 0.72).

Energy saving consumption attitude variable: All item of questions to measure energy saving attitude variable are valid (N=30), indicated by calculated r > r table (0.312). Overal respondent responses on question items are reliabel (Cronbach alfa 0.67).

Energy Consumption Behavior variable: Overall items of question to measure energy consumption behavior are valid (N=30), indicated by calculated r > r table (0.312). Respondent responses on overall items of question are reliable (Cronbach alfa 0.85).

4.2.2 Analysis on Environmental Concern

SPSS version 14 processing shown respondent environmental concern is medium, not high (M=5.1). It can be concluded although respondents have high education level, but based on New Environmental Paradigm (NEP) scale (Dunlap et al 2000) showed moderate result compared to range 1-7 likert scale. This is a clue that level of education does not always correlate with environmental concern.

4.2.3 Relationship between Environmanetal Awareness to Environemantal Concern

Based on SPPS version 14 results correlation between environmental awareness and environmental concern has shown level of sig. 0.009 which is less than 0.05. There are positive relationship between environmental awareness and concern, however the level of cohesiveness is weak (r=0.30). This is in line with previous finding based on NEP measurement that respondent environmental concern is not high, although respondent may have high environmental awareness, but it did not reflect their concern.

This is a challenge for environmental campaign due to the fact from this research that high environmental awareness does not always lead to environmental concern, so that has to be found other ways to increase environmental concern. This finding indicates a challenge in educating and campaigning environmental protection issues. So that has to be integrated with some other effort to increase environmental concern, such as social campaign for pro environment (through social advertising) or open the reward dan punishment approach.

4.2.4 The Effect of Environmental Concern toward Energy Saving Attitude

The test result concludes that environmental concern did not really affect energy saving attitude. The positive effect is small (r = 0.143), therefore from statistical point of view it did not affect dependent variable significantly. From correlation point of view there is positive correlation, but weak cohesiveness relationship. Another finding to confirm this conclusion could be indicated from its level of significant of 0.221 which is greater than alfa 0.05. Conclusion: environmental concern has no influence toward energy saving attitude. Next using R square test it is proof only 2% of environmental concern can explain energy saving attitude. 98% is explained by other factor out sisde of this research.

Therefore, positive energy saving attitude might generally be formed due to energy consumption cost and some other economical factors not by its environmental concern, such as by the increase of tariff, saving energy campaign to minimize energy cost, therefore, it is more due to egocentric orientation: cost or financial loss consideration not because of environematal concern.

4.2.5 The Effect of Energy Saving Attitude toward Consumer Energy Consumption Behavior

SPSS Output showed there are strong and significant influences of consumer energy saving attitude toward consumer energy consumption behavior (level of sig. 0.000 less from alfa 0.05), means that consumer attitude of energy saving consumption influenced significantly toward energy consumption behavior. This finding support earlier research that attitude is a strong predictor on behavior (Ajzen, 1991). R square test showed that attitude of energy saving could explain consumer energy consumption behavior amounted to 39.5%. The remaining of 60.5% is explained by other factors outside of this research. Therefore, individual attitude on energy saving consumption could reflect his behavior in energy consumption behavior. The more positive on consumer attitude toward energy saving, the more concern in energy consumption behavior. Therefore, in the context energy conservation, including electricity, effort to encourage positive attitude is crucial because it will affect the expected behavior.

V. Conclusion

5.1. Conclusions

- 1. Based on measurement using new environmental paradigm scale respondents have medium environmental concern (M=5.11), so that categorized not high compared to the maximum likert scale (1-7).
- 2. There are positive relationship between environmental awareness and environmental concern, but not too strong.
- 3. Consumer environmental concern did not influence consumer energy saving attitude.
- 4. Consumer saving energy attitude influenced energy consumption consumer behavior. Both variables have strong positive relationship.

VI. Limitation and Suggestion for the Next Research

6.1. Limitation of the research

- Behavioral measurement for energy consumption is conducted by consumers self report.
 This method relatively easy, however it has also weaknesses such as subjective in nature.
 Responden response might be bias and did not reflect reality.
- 2. Population target is limited to civitas academica STEKPI School of Busniess and Management, so it might not reflect the whole energy consumer"s response.

6.2. Suggestions for the next research

- 1. To enrich this research, it is suggested for further research with a wider population target.
- 2. Next research is suggested to use experimental design, so that causal relationship can be be well tested.

References

- Ajzen, Icek (1991). The Theory of Planned Behavior. Organizational Behavior and Human Decision Processes, 50, 179-211.
- BUMN Track, Juli 2008. PLN Kejar Target Efisiensi Rp. 5 Trilyun.
- Dietz, Thomas; Fitzgerald, Amy and Shwom, Rachael (2005). Environmental Values. *Environmental Science and Policy Program*, Department of Sociology, Michigan State University, East Lansing, Michigan 48824.
- Dunlap, Riley E., Van Liere, Kent D., Mertig, Angela G., Jones, Robert Emmet (2000). Measuring Environmental Endorsement of the New Ecological Paradigm: A Revised NEP Scale. *Journal of Social Issues*, Vol. 56, No. 3, 2000, pp. 425–442.
- EPA Energy Conservation (1997). Pollution Prevention (P2) Education Toolbox:

 Tools for Helping Teachers Integrate P2 Concepts in the Classroom. *United States Environmental Protection Agency*. EPA-905-F-97- 011 August.
- Fishbein, Martin (1981). An Investigation of the Relationship between Beliefs about an Object and the Attitude toward that Object. This Week"s Citation Classic. *CC/Consumer* 38, September 21, 1981.
- Grinstein, Amir and Nissan, Udi (2009). Demarketing, Minorities, and National Attachment. *Journal of Marketing*. Vol. 73 (March), pp. 105 - 122.
- Hair, J.F.Jr., Black, W.C., Babin, B.J., Anderson, R.E. and Tatham, R.L. (2006). *Multivariate Data Analysis*. Sixth Edition. Pearson International Edition.
- Hini, Dean; Gendall, Philip and Kearns, Zane (1995). The Link between Environmental Attitudes and Behavior. *Marketing Bulletin*, 6, 22-31, Article 3.
- Jackson, Tim (2004). Motivating Sustainable Consumption: a Review of Evidence on Consumer Behaviour and Behavioural Change. *A Report to the Sustainable Development Research Network Centre for Environmental Strategy*, University of Surrey, GUILDFORD Surrey.

- Kompas, Jumat/3 Oktober 2009. Perubahan Iklim: Indonesia Kecewa Sikap Negara Maju. Hal. 12.
- Kotler, Philip and Lee (2008). *Social Marketing: Influencing Behavior for Good*. 3rd Edition, Sage Publications.
- Leiserowitz, Anthony; Maibach, Edward and Roser-Renouf, Connie (2008). Saving Energy at Home and on the Road: A Survey of Americans" Energy Saving Behaviors, Intentions, Motivations, and Barriers. A study, conducted by the Yale Project on Climate Change and the George Mason University Center for Climate Change Communication.
- Owens, Susan and Driffill, Louise (2008). How to Change Attitudes and Behaviors in the Context of Energy *Energy Policy*. *Elsevier Ltd*.
- Pamlin, Dennis, Editor (2002). Sustainability at the Speed of light. Opportunities and Challenges for Tomorrow"s Society. *World Wild Foundation (WWF) Sweden and WWF International*.
- Peccei, Aurelio; Ikeda, Daisaku (1988). *Sebelum Segalanya Terlambat*. (Edisi Bahasa Indonesia). PT. Indira Jakarta.
- Reisch, Lucia; Spash Clive L. and Bietz Sabine (2008). Sustainable Consumption and Mass Communication: German Experiment. Socio-Economics & The Environment in Discussion. *CSIRO Working Paper Series*, 2008-12.
- Reusswig, Fritz Hermann; Lotze-Campen and Katrin Gerlinger (2009). Changing Global Lifestyle and Consumption Patterns: The Case of Energy and Food. *Potsdam Institute for Climate Impact Research (PIK) Global Change & Social Systems Department. Browsed, 13 January.*
- Ryan, Anthony and Spash, Clivel (2008). Measuring "Awareness of Environemental Consequences": Two Scales and Two Interpretations. Socio Economic and Environment in Discussion. *CSIRO Working Paper Series*, 2008-10.
- Schultz, P. Wesley and Zelezny, Lynnette (2003). Reframing Environmental Messages to be Congruent with American Values. *Human Ecology Review*, Vol. 10, No. 2. 126-136.
- Solomon, Michael (2007). Consumer Behavior: Buying, Having and Being. New Jersey: Pearson International Edition.

- Stern, Paul C.; Dietz, Thomas; Abel, Troy; Guagnano, Gregory A. and Kalof, Linda (1999). A Value-Belief-Norm Theory of Support for Social Movements: The Case of Environmentalism. *Human Ecology Review*, Vol. 6, No. 2, 81-97 © Society for Human Ecology.
- Stern, Paul C. (2000). Toward a Coherent Theory of Environmentally Significant Behavior. *Journal of Social Issues*, Vol. 56, No. 3, pp. 407–424. National Research Council
- Watson, Anna; Viney, Howard and Schomaker, Patrick (2002). Consumer Attitude to Utility Products: a Consumer Behavior Perspective. *Marketing Intellegent and Planning*. 20/7. 394-404.
- Yusgiantoro, Poernomo (2004). "International Workshop on Solar Energy Utilization". Badan Pengkajian dan Penerapan Teknologi (BPPT), Jakarta, 6 Oktober. Sumber: *Suara Pembaruan*, 10 Oktober 2004. www.energi.lipi.go.id.

in determining a relationship between Perception of mall and patronage loyalty. Brand trust and brand affect is related with each other because they share variations in affective view, hedonic values and emotional response (Ong *et al.*, 2012 in Khong and Ong, 2014). Both constructions create an emotional response (Khong and Ong, 2014). Based on the discussion, the following hypotheses were derived:

H₅: Brand Trust has a positive impact on Brand Affect.

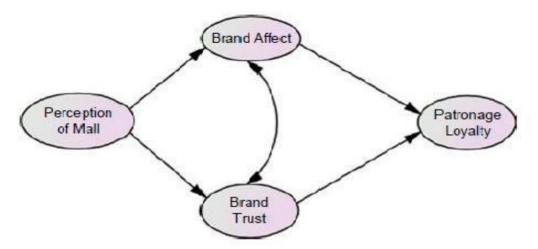


Figure 1. Conceptual Framework

Measurement

Four variables used in this research are perception of mall, brand affect, brand trust and patronage loyalty. Perception of mall revelation was measured with five items adapted from a study by Khong and Ong (2014). Brand Affect measured by five items adapted revelation of the study by Khong and Ong (2014). Brand trust is measured by the revelation that five items adapted from a study by Khong and Ong (2014). Patronage loyalty revelation was measured with five items adapted from a study by Khong and Ong (2014) all items of revelation variables were measured using a five-point *Likert* scale that starts from 1 "strongly disagree" to 5 "strongly agree".

Data Collection

Data collection through written questionnaires to 176 respondents in the scope of Trisakti University, sampling using non-probability sampling method sampling technique with purposive sampling which criteria consumers with the frequency of shopping at the mall Taman Anggrek at least 2 times within 6 months.

Data analysis and findings

There are several tests to calculate and analyze the data before testing the relationship to be observed that as Cronbach's Alpha was used to measure reliably the data with SPSS, except that this calculation is also processed with AMOS 6 to confirm factor model and the validity of all constructs a theory in this study. Standardize factor loadings for each statement of the average between 0.545 and 0.799, the construct reliable the average between 0.770 and 0.871. The overall average results shows that all items meet the validity and reliable criteria. Then the next steps to test the desired relationships using Structural Equation Modeling (SEM).

Table I Measurement

Variables	Standardized	Cronbach's
	factor loading	Alpha
Perception of mall Khong and Ong (2014)		0.805
The type of products that Taman Anggrek Mall		
offered follow the development trend of the	0.773	
moment.		
Taman Anggrek Mall offered lot variety of	0.762	

products.		
Taman Anggrek Mall offered high products	0.704	
quality.	0.704	
Taman Anggrek Mall provided height quality of	0.587	
services.	0.367	
I was satisfied with the service in Taman		
Anggrek Mall.	0.545	
Brand Affect Khong and Ong (2014)		0.871
I liked Taman Anggrek Mall, and I will always	0.748	
choose Taman Anggrek Mall.		
I always shop in Taman Anggrek Mall.	0.756	
I feel good when visiting Taman Anggrek Mall.	0.829	
Shopping at the Taman Anggrek Mall makes me	0.777	
happy.	0.777	
Shopping at the Taman Anggrek Mall fun for me.		
	0.686	
P. 14 477 10 (2014)		0.770
Brand trust Khong and Ong (2014)		0.770
Taman Anggrek Mall is a mall that could be	0.672	
trusted.		
Taman Anggrek Mall is a mall which is safe to	0.636	
visit.		
I believe Taman Anggrek Mall.	0.712	
I rely on Taman Anggrek Mall.	0.716	
Patronage loyalty Khong and Ong (2014)		0.867
I will continue to visit Taman Anggrek Mall each	0.799	
want to shop.		
I intend to continue to visit Taman Anggrek Mall.	0.784	
I am committed to Taman Anggrek Mall.	0.784	

I am willing to make an extra effort to shop in

0.791

Taman Anggrek Mall than others.

Estimates and Fit

Goodness of fit indices: Chi-square = 266,191, p = 0,000, goodness of fit index (GFI) = 0,845, The Root Mean Square Error Of approximation (RSMEA) = 0,077, Adjusted Goodness - of - Fit Index (AGFI) = 0,796, normed fit index (NFI) = 0,843, Turker- Lewis Index (TLI) = 0,896, Comparative Fit Index (CFI) = 0,912, CMIN / DF = 2,048. The overall average results still meet the criteria and are able to be used for further testing. Thus, the measurement models in accordance with good data.

Table II
Characteristics of respondents

Characteristics	Category	Frequency	Percentage (%)	
Gender	Man	57	32.4	
	Woman	119	67.6	
Age	17 years - 19 years	54	30.7	
	20 years - 22 years	101	50.4	
	> 23 years	21	11.9	
Frequency of	quency of 2-3 times		34.6	
Purchase				
	4-5 times	62	29.5	
	> 5 times	53	35.8	

n: 176

Table III

Hypotheses testing

Hypothesized path	Estimate (β)	p-value	Decision
H1: There is a positive impact perception of	0.240	0.063	H1 Not
mall on brand affect.			Supported
H2: There is a positive impact perception of	0.771	0.000	H2 Supported
mall on brand trust.			
H3: There is a positive impact brand Affect	0.156	0.023	H3 Supported
on patronage loyalty.			
H4: There is a positive impact brand trust on	0.756	0.000	H4 Supported
patronage loyalty.			
H5: There is a positive impact brand affect on	0.328	0.022	H5 Supported
brand trust.			

Discovery and results

Statistical tests were conducted to test the hypothesis by using SEM. In Table III shows the results, the H1 is not supported ($\beta = 0.408$, p => 0.05). This shows that consumers perception of mall do not affect brand affect, while H2 is supported ($\beta = 0.771$, p = <0.05) in this case shows that the perception of mall affects brand trust. H3 is supported ($\beta = 0.156$, p = <0.05) shows that brand affect affect patronage loyalty. H4 is supported ($\beta = 0.756$, p = <0.05) shows that brand trust affects patronage loyalty. Similarly H5 supported ($\beta = 0.328$, p = <0.05), this shows the brand trust affects brand trust.

Discussion and implications

This research is based on the previous research conducted by Khong and Ong (2014). Based on the findings of this research, it shows that increasing the perception of mall will increase brand trust, which will cause the increase in patronage loyalty whether directly or through brand affect. The mall management needs to give training and role-playing to employees, so the positive perception and consumer loyalty can increase. Then, increase and conduct cooperation with famous brands of the world to be marketed at the mall, so the purchase power of consumer will increase, making Taman Anggrek Mall to be the consumer"s choice to shop. Then, holdings live music or food festival every weekend by inviting celebrities and maintenance of machines and electronic devices in the mall. Lastly, it is important for Taman Anggrek Mall to keep the consistency and quality of

products, services, and building. Moreover, administering exhibition and routine events on religious big days and New Year event, this will encourage consumer to be willing to conduct extra effort to visit and shop at Taman Anggrek Mall.

Limitation

This present study had several limitations. First, this study only took samples of student respondents in the scope of Trisakti University. Second, this study only used a sample of 176 respondents at the time of data collection. Third, this study was only done in one mall only. Fourth, research is just entering the variable perception of mall, brand affect, brand trust and patronage loyalty that enables there are other variables that can be entered.

Direction for future research

In future research, the number of respondents to be added exceeds 176 respondents, for data to be better. Future studies should use the sample not only Trisakti University, but extends to all areas in Jakarta. Future research is expected to expand the research not only with one mall Taman Anggrek, but other malls like Plaza Senayan, Senayan City and Pondok Indah Mall. In addition, researchers in the future could add a variable to add another variable, atmospheric and attractiveness (Teller and Reuttere 2008 in Khong and Ong, 2014).

References

- Bee Wah Yap T. Ramayah Wan Nushazelin Wan Shahidan, (2012), "Satisfaction and trust oncustomer loyalty: a PLS approach", *Business Strategy Series*, Vol. 13 Iss 4 pp. 154- 167.
 - Ebru Tümer Kabadayi, Alev Kocak Alan. (2012), "Brand Trust and Brand Affect: Their Strategic Importance on Brand Loyalty", *Journal of Global Strategic Management*.
 - Enrique P. Becerra Vishag Badrinarayanan, (2013),"The influence of brand trust and brand identification on brand evangelism", *Journal of Product & Brand Management*, Vol.22 Iss 5/6 pp. 371 383.
 - Eddie C.M. Hui, Pei-hua Zhang and Xian Zheng. (2013), "Facilities management serviceandcustomer satisfaction inshopping mall sector", Vol. 31 No. 5/6, 2013pp. 194-207 Eva M. González-Hernández Margarita Orozco-Gómez, (2012), "A segmentation study of Mexican
 - consumers based on shopping centre attractiveness", *International Journal of Retail & Distribution Management*, Vol. 40 Iss 10 pp. 759 777.
 - Fatih Geçti1 & Hayrettin Zengin (2013). "The Relationship between Brand Trust, BrandAffect, Attitudinal Loyalty and Behavioral Loyalty: A Field Study towards Sports Shoe Consumers in Turkey". *International Journal of Marketing Studies*; Vol. 5.
 - Kok Wei Khong Fon Sim Ong , (2014), "Shopper perception and loyalty: a stochastic approach to modelling shopping mall behaviour", *International Journal of Retail &Distribution Management*, Vol. 42 Iss 7 pp. 626 642.
 - Maria Del Mar Alonso-Almeida Merce Bernardo Josep Llach Frederic Marimon ,(2014),"Building loyaltythrough functional and hedonic quality", *Industrial Management & Data Systems*, Vol. 114 Iss 3 pp. 387 –404.
 - Wei-Ming Ou Chia-Mei Shih Chin-Yuan Chen Kuo-Chang Wang, (2011), "Relationshipsamong customer loyalty programs, service quality, relationship quality and loyalty", *Chinese Management Studies*, Vol. 5 Iss 2 pp. 194 206.