EFFECTS OF ENVIRONMENTAL FRIENDLINESS TOWARDS GREEN PURCHASE INTENTION WITH GREEN PURCHASE VALUE AND GREEN LOYALTY AS MEDIATING VARIABLE IN PALM OIL PRODUCTS

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ABSTRACT

Environment sustainability has received a huge attention from consumer, especially palm oil industry because of it's responsible for pollution, deforestation, etc. But yet, the demand for palm oil increased every year because of it's usefulness and affordable price. This research aims to examine the impact of environmental friendliness, green perceived value, green loyalty on green purchase intention, also to examine the mediating effect of green purchase intention in the palm oil market. A total of 212 respondents who resides at Jakarta area were taken for this study using questionnaire, but only 147 respondents were qualified to be analyzed. Convenience sampling method was applied, and analysis conducted using smart PLS 3. The results shows that environmental friendliness mediated by green perceived value has a positive significant impact towards green purchase intention. However there is no positive impact of green loyalty and environmental friendliness towards green purchase intention. Green perceived value in this case could be use by manufacturer to improve environmental friendliness, and also to increase green purchase intention, to differentiate products from the available competitor, give positive impression to the product and also to generate more demand and purchase intention through the product. In addition, it is important for the company to do market re-positioning and to move towards environmentally friendly direction in order to increase the value of the products.
Keywords: green marketing, green loyalty, green perceived value, green purchase intention, palm oil.

1. INTRODUCTION

Lately, there was a rise in the awareness and concern to the environment by consumers. The behavioral-changed can be viewed from the environmental organization and some movement that against the activities that may damage the environment (Jupesta , Boer and Parayii, 2011). Therefore, green marketing is the one way that companies do for the sustainable development in their marketing strategic and also for the environment concern (Choudhary dan

Willyanto Effendi; Alexandra J. O. Hartandy; Dina Aryanti; Ina A. Murwani, Vol 7 Issue 2, pp 7-14, February 2019

Gokarn, 2013). There are three definitions of green marketing according to the American Marketing Association (AMA) years 2009, the first is retailing definition that is the process marketing of product that has been calimed as safe towards the environment. Second, Social marketing definition is the development and process of its marketing designed to minimize negative effect on the environment or to increase the environment quality. Third, environments definition that is the efforts made by the organization for producing , promoting , giving packaging and claimed the products that concern for the environment. Where as in this research context is green marketing and environment definition has an important bounding towards consumers because this is as the way for the palm oil producers to prove that the product has a good effect to the environment with applying RSPO logo (RSPO, 2008).

The research has been conducted by Chen, Chen and Tung (2018) shows that purchase intention is influenced by consumers behavior towards its intention. Research on green marketing are still seeing on the marketing mix factors and it had not yet seen lots of environmentally friendly behavior of someone. By including the behavior factor, the factors that effects to green purchase intention is becoming more complex due to variations of social and culture influence diverent in one and other area. Chen (2011) have conducted research on consumer behavior factor that affects on the green purchase intention, those are environmental friendliness , green perceived value and green trust. Chen (2011) declares that his research limitness is the research that only concern on the green products; the research that only focus in Taiwan; study that only gives cross-sectional data; variable price is not included yet in the research. The research was done in Taiwan, and have not been done in another area, in the other side, green purchase research that has been done in Indonesia was only about cosmetics and only a few about palm oil products (Muhammad dan Ratnasari, 2014; Elles dan Sihombing, 2017). Instead, Indonesia is the one largest country that produce palm oil. This is the reason why the theory is being examine in Indonesia, especially in Jakarta to see if the theory can be applied to consumer behavior toward palm oil products.

Palm oil is the one main ingredient that can be used in the various products, such as cosmetics, lubricant oil, food until fuel (Begum, Siwar dan Alam, 2016). Because of the price is quite cheap, palm oil is more often used in the wide product range. Based on data from Figure 1, has been increase in needs of the industry of palm oil as many 40% from 2008 to 2016. To fulfill the market needs, there are increasing of clearing lands of palm oil production in Indonesia (3% per Year) , Malaysia (3.2% per year) and Thailand (4.4% per year) in 2015 (IPOA, 2016; MPOB, 2016; PALMEX 2015). The increase in clearing land of palm oil in Indonesia has been causing a diminution of sanctuary forest as many as 31 million hectares in 2010 (FAO, 2010; MoFor, 2014). The frequent burn the forest to the efficiency the cost and time it causes the form of 35 billion tons of carbon dioxide that mofor pollute the air and the atmotsphere (MoFor, 2014).

Figure 1. CPO Production increase from 2008 to 2016

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Production (MillionTonnes)	19.2	19.4	21.8	23.5	26.5	30	31.5	32.5	32
Export (Million Tonnes)	15.1	17.1	17.1	17.6	18.2	22.4	21.7	26.4	27
Export (USD)	15.6	10	16.4	20.2	21.6	20.6	21.1	18.6	18.6
Area (Million Ha)	n.a	n.a	n.a	n.a	9.6	10.5	10.7	11.4	11.8

Figure 1. CPO Production increase from 2008 to 2016

Source : Indonesian Palm Oil Producers Association (GAPKI) and Indonesian Ministry of Agriculture

2.   LITERATURE RESEARCH

2.1 Environmental Friendliness

Environmental friendliness is an attitude of environmental friendly who comes from ourselves about the worry of the problem of environment. According to Zimmer et al .,(1994) was quoted by Chen (2016), attention to

environment, the norms that come from inner-self and the norms that not to do the damage to the environment or injunctive norm. Chen (2016) giving a statement that consumers who friendly to the environment having behavior such as read the label product, using environment friendly garbage bag, buying recycle-able package and also donate the recycle-able trash to the environmental groups.

The previous research also shows that the low level of perceived value can affects the purchase intention (Patterson and Spreng, 1997 and Cronin, Brady, Thomas and Hult, 2000). It be caused there are Global Warming issue that makes consumers more care and want to buy a more expensive for green product (Chang and Chen, 2013). Besides, company has a willing to increasing environmental friendliness in their product, so it can be seen by customers as the higher environment quality products (Laufer, 2003).

H1: Palm oil *Environmental friendliness* product having positive influence towards *green perceived value*

In addition, can be seen that green loyalty influenced by environmental friendliness because green loyal influenced by commitment level of someone to rebuy the product that has positive impact to environment (Dick dan Basu, 1994). Based on the above definition, this study aims to see the commitment of someone to buy palm oil product and effecting factor, that is environmental friendliness. The existence of the habit of consumers to buy that product may be caused commitment to an object such as a product, service, brand, group or in the context of this is the environmental friendliness (Chen, 2010).

H2: Palm oil *Environmental friendliness* product having positive influence towards *green loyalty*

Previous research shows that there is the influence of environmental friendliness to green purchase intention (Chen and Chang, 2012). In this case of environmental friendliness can inform consumers that the green characteristic of the product would motivate consumers to purchase green products (Young et al ., 2010). From the previous study, has been found that claim and label that is used to showing environmental friendliness of a product having well responded if given more detailed information (Nittala , 2014). So it can build consumer desire to buy a product (Rahbar and Wahid, 2011).

H3: palm oil Environmental friendliness product having positive influence towards green purchase intention

2.2 Green Perceived Value

Green perceived value its a judgement rendered by consumers with a comparison between benefits received than the cost or sacrifice issued by the consumer (Sweeney & Soutar, 2001). If the value given by the consumer is high , then the consumer's trust would increase as well but if the bad value is given it might cause a loss of trust and desire consumer interest to buy the goods.

The prominent value in a product could be distinguishing with similar products that in its market (Kim 2008). Perceived value by consumers not only a major cause of consumers in purchase products, but also a key role in affect consumers in purchase products (Zhuang, 2010). Koller (2012) also clarifies that the value of environmentally-friendly in a product that is an important matter to consumers whose aware to environment.

Referring to previous studies according to Akbar et al.(2014) revealed that there is a positive relation between green perceived value and green purchase intention. By the following statement, it conducts a hypothesis for the green perceived value, as follows;

H4: *Green purchase value* palm oil product having positive influence towards *green purchase intention*.
Green Loyalty

Green loyalty is a commitment from someone for reuse a product or service favored by they consistently in the long time. Chen (2013) also gave a definition of green loyalty is a level of willingness to reuse a product or service based on commitment and attitude environmentally-friendly either it is according to the products, services, company, a brand, group, and the other. Dick and Basu (1994) also provided statement that loyalty is a fidelity of customers in a product or trademark in sourcing regularly. Company can improve the sales by give education to consumers of their program related to the environmental for the worried customers about environment problem can provide loyalty to the company. Previous research prove that there is a positive influence between the environmental friendliness of green purchase intention that is mediated by a factor of green loyalty (Chen ,et al ., 2016) .

H5: *Green loyalty* having positive influence towards *green purchase intention* in palm oil products

2.3 Green Purchase Intention

Green Purchase Intention simply define as an intention of consumers to buy a product or using a service that is friendly to environment (Akbar et al., 2014). According to Chen (2011) that quoted by Akbar et al. (2014) the produce of pollution in the environment have been much paid attention to be more serious by the public and the community. The seller and manufacturer need a change in production process and business model in order to convinced the consumers that they are friendly to environment (Chen, Beckford 2010, et al., 2010).

According to Peattie (1995) that quoted by Mahmood et al. (2014) stated that the community at this time is more aware to the problem of environment and having a belief when they decided to purchase a friendly-environment product they will reduce the impact of environment damage. With a number of some reviews from previous studies, it can be concluded that the public started to realize to aware of the importance the environment for life and started trying to alter behavior in purchase products that they believe environmentally friendly. Now the company have to see based on the marketing side that provides information to the consumers of its product is environmentally friendly may have an impact on their products or services sales. Green purchase intention in general influenced by factors like environmental friendliness that is mediated by a factor of green purchase value and green loyalty (Chang and Chen, 2008; Hoch and Deighton, 1989; Chen, 2013).

2.4 Research Model

According to the theory that described, can be developed the framework about the influence of the environmental friendliness of green purchase intention by applying green perceived value and green loyalty as a mediator variable.

In the research conducted by Nik Abdul Rashid (2009) it was also found that eco-label in identification green products which has the environmental friendliness property can attract consumers in effecting buys intention. In addition, in the research that conducted by Loureiro and Lotade, (2005) discovered that consumers in developing countries have shown the desire to pay more expensive for eco-friendly products. In the study conducted by the Beckford, et al. (2010) and Chan (2001) states that the green purchase intention also moderated by green purchase behavior, where in this research are green perceived value and green loyalty.
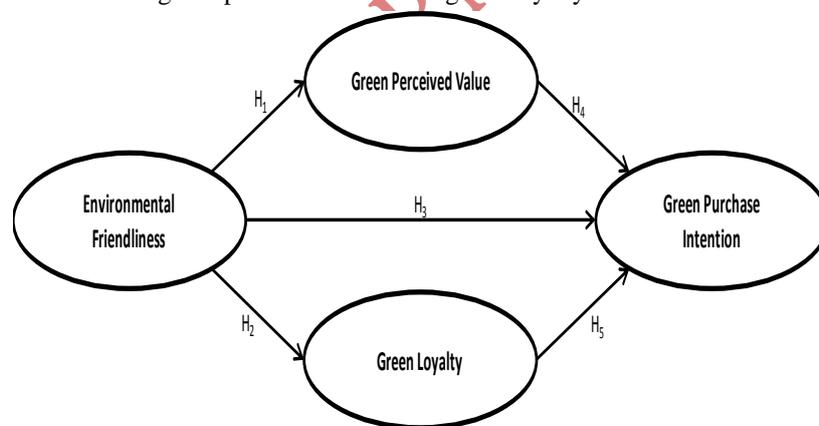

Figure 2. Research model used for this study (Chen, et al. , 2016)

3. RESEARCH METHODOLOGY

3.1 Overview of an Object Research

In this study, deductive approaching is being used because we start with the general theory, then use that theory for a more specific case. The purpose of this research is explanatory research will prove cause and effect relation between variable (Saunders, Lewis & Tornhill, 2009). Time horizon in this research using the cross-sectional study with the data collected only once, maybe during the day, week, or months period in order to answer the research question.

The method that will be use in the data is questionnaire method at the level analysis is customer (Table 1.). The respondents will be chosen randomly with a total 140 questionnaires. The object of the study is Indonesian people, especially DKI Jakarta who used or purchase cooking oil products derived from palm.

3.2 Data Collection Techniques

In this research, a population that will be chosen as sample are adults in indonesia who ever used or had been puchase palm oil products in Jakarta. In demography age, gender, marital status, address, levels of spending, the level of education and work. The sampling will be done randomly by applying convenient technique and the data collection was done by spreading the questionnaire by *Google forms*. This study is measured using likert scale with a scale from 1 to 7 which are then the results will be analyzed using SEM or *Structural Equation Modelling* with *smart PLS*. Total collected sample was 140 in then will analysed with *smart PLS 3*.

Table 1. The questionnaires used in this study

Factor	Questionnaire Items
Environmental Friendliness (EF)	I believe that this product is friendly to the environment (EF1)
	I believe that using these products can reduce the negative impact on the environment (EF2)
	Compared with similar products, this product more friendly to the environment (EF3)
Green Perceived Value (GPV)	I was happy for bought this product because the impression environmentally friendly (GPV1)
	I think by buying this products is a the right decision because the products having good functionality in the environment (GPV2)
	Generally, I am glad to buy this products, because it is environmentally friendly (GPV3)
	From the perspective of the effectiveness of the environment,, buy this product is the right decision (GPV4)
Green Loyalty (GL)	I want to rebuy this product because of their functions in the environment (GL1)
	I am more interested to buy this products compared to other because by its performance in the environment (GL2)
	I do not think to replace this product because the concern of this product to the environment (GL3)
	I am about to continue to buy this product it is because environmentally friendly (GL4)
Green Purchase Intention (GPI)	I have a desire for purchase this products because of the concern to the environmen (GPI1)
	I want to buy this product in the future because of its performance (GPI2)
	Generally, I am glad to buy this products, because it is environmentally friendly (GPI3)

4. RESULT AND DISCUSSION

4.1 Research Object

The study was conducted using convenience methods of sampling and the questionnaire spread use *Google forms*. The questionnaire have been developed using previous studies and has been designed according to variable research relating to this research. As an assessment, the respondents will be given a question for indicates the match between respondents with Likert Scale using 7 points each statement.

In the end, data collected as many 212 respondents where 147 are ever buy palm oil and live in Jakarta. Rate response from the study is 69 %. From 212 respondents also shows that 82 % of the total respondents ever buy palm oil and 74 % of respondents know that palm oil is unfriendly environmental.

4.2 Calculating Result from Research Model

The research indicated the results of the demography analysis from questionnaire items in the Table 2. From the Table 2 shows that the range age of the respondents 17-25 has percentage as many 48,98 %, in the range age of the 26-35 is 31.97 %, in the range age of the 36-45 is 13.61 %, in the range age of the 46-55 is 4.76 %, up 55 years worth 0.68 %. While for male respondents as many as 28.57 % and female 71.43 %, in marital status as many as 70.07 % single, married 28.57 %, and others 1.36 %. For the domicile correspondent in West Jakarta as much as 49.66 % , Central Jakarta 6.80 % , South Jakarta 21.77 % , East Jakarta 3.40 % , North Jakarta 18.37 %. Spending per month

respondents are Rp 0-2 million to 14.29 %, Rp 2-4 million to 33.33%, Rp 4-6 million to 34.01%, above Rp 6 million to 18.37% with Income Levels Rp 0-2 million is 4.08 % , Rp 2-4 million is 14.97 % , Rp 4-6 million a 27.21 % , at a rate of Rp 6 millions as much as 53.74 % . Levels of education, High School is 4.76 %, Diploma is 4.08 %, Bachelor is 76.87 %, Master is 14.29 %. The results of the questionnaire to 147 respondents, obtained the data purchase of environmental friendly products in last 3 months besides palm oil products is 74.15 % , and from 147 respondents of 78.91 % stated that palm oil is not environmentally friendly products.

Reliability and validity in this research has been calculated, in Table 3. The analysis shows the alpha value is above 0.7 as a whole data reliability consistent and having a strong reliability so the measurement of this research is acceptable (Hair, Anderson, Tatham, and Black, 1998).

AVE Value to show the converging validity and discriminant validity to the measurement. AVE is counting how well the questionnaire can explain average variation of the construct. From the research, it can be seen that the value of AVE was above on the 0.5, which means the measurement of the validity of converging is acceptable (Fornel and Larcker, 1981). To see the discriminant validity the square root of AVE construct must be higher than the correlation between construct and another variable (Fornel and Larcker, 1981). Can be seen in Table 3, diagonal element is the value of the root from the AVE value and the other elements are coefficient correlation in construct. The analysis shows value of the root from all the construct AVE value in this research are higher compare with correlation value from other variable. This is shows that discriminant validation is acceptable.

From the result of SEM analysis can be seen that there is a positive influence on hypothesis H1, H2, and H4. This is supported with the t analysis greater than the t table (1,96). In addition, can be seen also value R square from the green perceived value is 82 %, green loyalty of 79 % and green purchase intention of 75 %. R square show how much dependent variable explain variable independent, high value of R square also indicates that as a whole, almost all variable can be explained in the theory or this construct so that the possibility of another variable influence is only few.

Table 2. Demographic analysis results

Variable	Category	Frequency	Percentage
Sex	Male	42	28.57%
	Female	105	71.43%
Age	< 17	0	0%
	17 – 25	72	48.98%
	26 – 35	47	31.97%
	36 – 45	20	13.61%
	46 – 55	7	4.76%
	> 55	1	0.68%
Marital Status	Single	103	70.07%
	Married	42	28.57%
	Others	2	1.36%
Live Location	West Jakarta	73	49.66%
	Central Jakarta	10	6.80%
	South Jakarta	32	21.77%
	East Jakarta	5	3.40%
	North Jakarta	27	18.37%
Spending per Month	< Rp. 2.000.000	21	14.29%
	Rp. 2.000.000 - Rp.4.000.000	49	33.33%
	Rp. 4.000.000 - Rp. 6.000.000	50	34.01%
	> Rp. 6.000.000	27	18.37%
Education Levels	SMA	7	4.76%
	D3	6	4.08%
	S1	113	76.87%
	S2	21	14.29%
Income	< Rp. 2.000.000	6	4.08%

	Rp. 2.000.000 - Rp.4.000.000	22	14.97%
	Rp. 4.000.000 - Rp. 6.000.000	40	27.21%
	> Rp. 6.000.000	79	53.74%
In the last three months , did you do the purchase of environmentally friendly products ?	Yes	109	74.15%
	No	38	25.85%
Did you find that the cooking oil is the product friendly or not environmentally friendly ?	Environmental Friendly	31	21.09%
	Not Environmental Friendly	116	78.91%

Table 3. Analysis Result on *Cronbach's alpha* and AVE

Construct	Indicator	*Factor Loadings*	*Cronbach's alpha*	AVE	*Composite Reliability*
Environmental Friendliness (EF)	EF1	0.928			
	EF2	0.921			
	EF3	0.899	0.904	0.839	0.94
Green Perceived Value (GPV)	GPV1	0.941			
	GPV2	0.954			
	GPV3	0.949			
	GPV4	0.947	0.962	0.898	0.972
Green Loyalty (GL)	GL1	0.922			
	GL2	0.957			
	GL3	0.948			
	GL4	0.952	0.96	0.893	0.971
Green Purchase Intention (GPI)	GPI1	0.913			
	GPI2	0.93			
	GPI3	0.893	0.899	0.832	0.937

Table 4. The Correlation Analysis the Square Root of AVE

Construct	EF	GL	GPV	GPI
EF	0.961			
GL	0.891	0.945		
GPV	0.908	0.88	0.948	
GPI	0.77	0.861	0.79	0.912

Tabel 5. *Path Coefficient* Analysis Result

Jalur		β	t	R^2	Hasil Hipotesis
H₁ Environmental Friendliness	→ Green Perceived Value	0.89	40.53	0.82	diterima
H₂ Environmental Friendliness	→ Green Loyalty	0.91	58.52	0.79	diterima
H₃ Environmental Friendliness	→ Green Purchase Intention	-0.11	1.06		ditolak
H₄ Green Perceived Value	→ Green Purchase Intention	0.78	6.94	0.75	diterima
H₅ Green Loyalty	→ Green Purchase Intention	0.21	1.93		ditolak

5. CONCLUSION AND SUGGESTION

5.1 Conclusion

The result of this research confirm the important contributions from *Environmental Friendliness* towards *Green Perceived Value, Environmental Friendliness* towards *Green Loyalty* and *Green Perceived Value* towards *Green Perceived Intention*. Indirectly the *Environmental Friendliness* affects *Green Purchase Intention* positively through *Green Perceived Value* where is consistent with the previous research that has been done by Chen, Lai, Chang dan Yen (2016). But the absence influence of *environmental friendliness* and *green loyalty* towards *green purchase* intention Can be caused of the high need of palm oil so the *green* factor is being ignore in *purchase intention* people.

Green Marketing strategy in its implications not always ended with the success, there are several factors that influence *green purchase intention* and often required an unique idea to increase the marketing strategy for *green* products (Lim, Ting, Ng, Chin dan Boo, 2013). From the study, can be seen that desire the community to purchase *green* products influenced by *green perceived value* significantly so the marketing strategy is needed in giving an education and information to consumers about *green value*. By giving education and information to consumers about things that company have done to the environment to increase the quality of environment either in the clearing new land, maintaining the palm oil plantation, oil production process and distribution process so the company can increase the marketing performance level. In addition, the company is also can sign up RSPO certification, where is this certification confirms that the produced and sold palm oil products are appropriate to environmentally friendly aspect.

5.2 Limitation and Suggestion

This study is having limits in which the narrow scope that has been done only in DKI Jakarta and might be there are some other variables that affect *green purchase intention* and had not been discussed in this research, those are *price* and *environmental knowledge*. Because, Indonesian people is highly sensitive about prices and the education of the environmental impact of palm oil to people who are not equal yet to all region. In further research it is also expected that researchers can expand the scope of research not only in the palm oil sector, but also other sectors that may be related to environmental friendliness issues. In the future, other researcher might also considering the influence of certification through consumer's purchase intention.

Abbreviations

AMA	*: American Marketing Association*
AVE	*: Average Variance Extracted*
CPO	*: Crude Palm Oil*
FAO	*: Food and Agriculture Organization*
IPOA	*: Indonesian Palm Oil Industry*
MoFor	*: Ministry of Forestry*
MPOB	*: Malaysian Oil Palm Industry*
PALMEX	*: Palm Oil Expo*
RSPO	*: Roundtable on Sustaibable Palm Oil*
SEM	*: Structural Equation Modeling*

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