Effect of Green Product, Green Packaging, Green Advertising on Green Purchase Intention through Intervening Variables Green Satisfaction and Green Trust of Employee at the Directors Office of PTPN II

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Abstract: This study analysed the effect of Green Product, Green Packaging, Green Advertising on Green Purchase Intention Through Variables Intervening Green Satisfaction and Green Trust, case studies were conducted at the Employees of PTPN II's Board of Directors. The approach used is path analysis and a sample of 100 respondents. The results showed that all the variables studied had a significant effect on Green Purchase Intention (Z) where the variables that had the greatest total effect direct influence and indirect effect influence were the Green Product variable (X1) which was 148.8%, followed by the Green Advertising variable (X3) of 76.7 %, and the Green Packaging (X2) variable is 44.9%. The results also showed that the Green Purchase Intention (Z) model would be better if using the intervening variables Green Satisfaction (Y1) and Green Trust (Y2) indicated by increasing the significance value and the value of R^2.

1 INTRODUCTION

Consumption levels not based on sustainable principles globally lead to increasingly severe environmental problems such as global warming, water, air and soil pollution, and waste that encourage people to change their conventional consumption patterns and purchasing behaviour to solve environmental problems. Consequently, the phenomenon of green consuming behaviour has evolved as a new paradigm for practitioners and researchers in the field of contemporary consumer research (Deepak, 2018).

Consumers will be attracted to the product through its ability to be recycled and its natural chemical content, and by properly discriminating consumption of organic, energy-efficient or biodegradable packaging products. As proposed by Nugrahadi (2002) and Johri and Sahasakmontri in Chung and Kim (2011), that green product is an environmentally product. Furthermore, Nursanti and Melisa (2011) said that green advertising involves the packaging of advertisement in the form of

showing environmental awareness to give impact to environmentally friendly products so that the more strategic role to increase product sales.

In addition to ideas related to green product, green advertising and green advertising are also developing other ideas that affect consumers' buying intentions towards environmentally friendly products, such as the concept of green trust and green satisfaction (Chen, 2010). Chen (2010) defines green beliefs as consumer's desire to depend on an object. Meanwhile, satisfaction is the level of overall satisfaction or satisfaction felt by consumers, resulting from the performance of the product to meet the desires, expectations, and consumer needs (Mai, 1999; Oliver, 1994, 1996; Olsen, 2002) in Chen (2010).

2 LITERATURE REVIEW

Green Product is an environmentally sound product. A product designed and processed in such a way as

to reduce the effects that may contaminate the environment, both in production, distribution and consumption (Nugrahadi, 2002).

Several important indicators of green product include 1) the ability of the product to be recycled, 2) the green product has a positive impact on the environment, 3) the green product can reduce the damage to the environment, 4) the green product can save energy, 5) consuming green product is a good attitude and 6) green product gives convenience preference to be consumed by consumers (Chen, Chen and Tung, 2018). Environmental pollution problems caused by packaging have become increasingly serious (Zhang, 2018).

Therefore, today most of the companies in the world want to contribute to participate in promoting green packaging. Research Klaiman, Ortega and Garnache (2016) suggested that, today consumers prefer and love products that have environmentally friendly packaging, can be used repeatedly, using environmentally friendly materials. Green packaging indicator according to Rokka & Uusitalo (2008), Rundh (2009); Draskovic et al. (2009) among others; 1) packaging on green product can be recycled, 2) packaging on green product can be reused, 3) packaging on green product made from recycled material and 4) packaging on green product not using hazardous materials. The results of Joshi, Patel and Dave (2018) revealed that the meaning for green consumer behavior variables is that consumers will buy products in recyclable / biodegradable packaging rather than non-recyclable packaging products cannot be decomposed.

Zinkhan and Carlson (1995) in Stokes (2007) describe environmental-aware advertising as a promotional message that appeals to the needs and desires of consumers' concerns about the environment (Belch, 2001). Chen, Chen and Tung (2018) mentioned that green advertising indicator is influenced by media exposure that show advertisement and propaganda of environmentally friendly products on TV, radio, newspaper and magazine. Mohr et al. (1998) and Wei et.al. (2017) use indicators to measure green advertising scepticism; 1) aspects of green advertising objectives; 2), consumer confidence in green advertising content; 3) honesty in green advertising (Mohr, 1998; Wei et al., 2017). Chen (2010) defines green trust as a consumer's desire to depend on an object based on beliefs or expectations resulting from its credibility, virtue and environmental performance. Nuttavuthisit and Thøgersen (2017) identify consumer trust (green trust) as different factors of willingness that influence the likelihood

that consumers will act with green intention and strongly emphasize the need to manage consumer confidence as a prerequisite for market development for green products.

Liang, Choi and Joppe (2018) mentioned that the indicator of trust, among others; 1) the company is trustworthy, 2) the company gives the impression that it makes promises and commitments, 3) the company has the interest to be trusted, 4) keep promises and 5) the company wants to be known as a company that wants to keep promises and commitments. Chen (2010) further put forward his research proposing a new concept of green satisfaction (green satisfaction). Liang, Choi and Joppe (2018) define green satisfaction as a satisfactory level of satisfaction of consumption to satisfy customers' environmental desires, sustainable expectations, and green needs. The indicator of green satisfaction, among others; 1) the consumer is happy, 2) the consumer is satisfied with his decision to buy green products, 3) the consumer feels contribute to the environment, 4) the consensus is satisfied with the environmental awareness, and 5) the consumer is satisfied with the environmental performance (Chen, 2012).

Green purchase intention in general can be interpreted as the behaviour and desire to buy environmentally friendly products (Deepak and Kant, 2018). Some important indicators of green purchase intention according to Chen, Chen and Tung (2018), among others; 1) the desire to buy green product in the future, 2) the desire to consume in the future because the green product gives less pollution impact, 3) the consumer will give recommendation to other party to use green product, and 4) the green product is chosen also because the government recommendation.

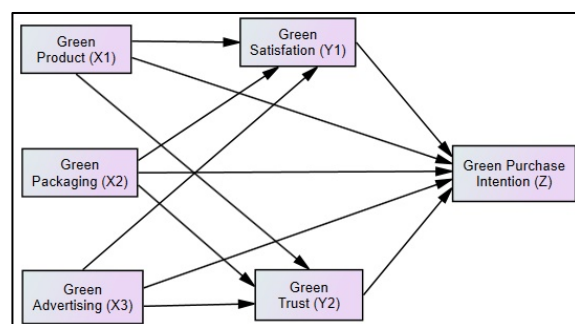Based on the theoretical basis above, the frame of thinking in this study are as follows:

Figure 1: Conceptual Framework.

Further hypothesis in this research is as follows:There is a positive relationship between

green product (X1), green advertising (X2) and green packaging (X3) variables directly affecting green purchase intention (Z) of employee The Directors Office of PTPN II.

a. There is a positive relationship between green satisfaction (Y1) and green trust (Y2) variables as intervening variable affecting green purchase intention (Z) of employee The Directors Office of PTPN II.

b. There is a positive relationship between green satisfaction (Y1) and green trust (Y2) as intervening variable on green product (X1), green advertising (X2) and green packaging (X3) variables in influencing the green purchase intention (Z) of employee The Directors Office of PTPN II.
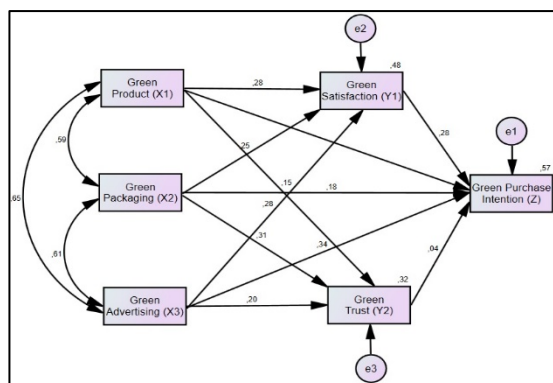
3 RESEARCH METHODS

This research was conducted to the employees of the PTPN II Office Directors of Tanjung Morawa on May 1, 2018 until August 1, 2018 with the number of samples of 100 people using the technique of sampling non-probability sampling by random sampling. Methods of data collection through questionnaires containing questions/ tatements using Likert Scale. The data obtained from the questionnaire is then analyzed by using the Path Analysis statistical modeling technique. This model is to know the direct and indirect effect of a set of independent variables (exogenous) on endogenous varabel (Sani, 2013). This analysis is processed with software AMOS Version 22. Preparation of the research flow diagram as follows :
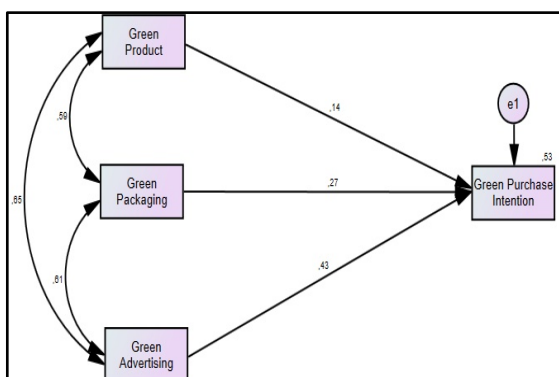
1. Path Analysis Diagram without intervening variable

Figure 2: GPI without Intervening Variables.

2. Path Analysis Diagram with intervening variable

Figure 3: GPI with Intervening Variables.

4 RESULT AND DISCUSSION

4.1 Green Purchase Intention Model without Intervening Variables

Based on Figure 2, it can be known that Green Pridyct (X1) variable affect Green Purchase Intention (Z) as much as 0,144, Green Packaging (X2) affect Green Purchase Intention (Z) as much as 0,270 and Green Advertising (X3) affect Green Purchase Intention (Z) as much as 0,430 and R square value (R2) as much as 0,530.

Table 1: Regression Weight Without Variabel Intervening

	Estimate	S.E.	C.R.	P	Label
z <--- x2	0,27	0,1	2,882	0,004	
z <--- x1	0,144	0,103	1,404	0,16	
z <--- x3	0,43	0,096	2,345	***	

Thus, the equation is as follows :

$$Z = 0{,}144 * X_1 + 0{,}270 * X_2 + 0{,}430\ X_3 + e \qquad (1)$$

From the three variables, there is one variable that does not significantly affect Green Purchase Intention (Z) ie Green Product (X$_1$) variable, while two other variables Green Packaging (X$_2$) and Green Advertising (X$_3$) statistically significantly influence Green Purchase Intention (Z). Among the three variables, the greatest effect on Green Purchase Intention (Z) is Green Advertising variable (X$_3$).

4.2 Green Purchase Intention Model with Intervening Variables

Based on the results of data estimation using Amos software, the results as presented in Figure 2. Based on the figure, it is known that all endogenous and exogenous variables used choose a positive effect on the dependent variable, Green Purchase Intention (Z). Besides this model is relatively better than the model without the moderating variable marked by increasing R2 value to 0.570 and all variables statistically significant at α = 0.05.

The Green Product variable (X1) affects Green Satisfaction (Y1) of 0.274, affects Green Trust (Y2) of 0.119 and affects Green Purchase Intention (Z) of 0.055. The Green Packaging variable (X2) affects Green Satisfaction (Y1) of 0.252, affects the Green Trust (Y2) of 0.248 and affects Green Purchase Intention (Z) of 0.199. The Green Advertising variable (X3) affects Green Satisfaction (Y1) of 0.254, affects Green Trust (Y2) of 0.144 and affects Green Purchase Intention (Z) of 0.331. The Green Satisfaction (Y1) variable has an influence on Green Purchase Intention (Z) of 0.302. The Green Trust variable (Y2) has an influence on Green Purchase Intention (Z) of 0.051.

Table 2: Regression Weight With Variable Intervening.

		Estimate	S.E.	C.R.	P	Label
y2	<--- x3	0,144	0,085	1,692	0,042	
y1	<--- x1	0,274	0,1	2,736	0,006	
y2	<--- x1	0,119	0,091	1,306	0,041	
y1	<--- x3	0,254	0,093	2,723	0,006	
y1	<--- x2	0,252	0,098	2,585	0,01	
y2	<--- x2	0,248	0,089	2,783	0,005	
z	<--- y1	0,302	0,098	3,09	0,002	
z	<--- x2	0,199	0,102	1,962	0,05	
z	<--- y2	0,051	0,107	0,475	0,035	
z	<--- x1	0,055	0,102	0,541	0,048	
z	<--- x3	0,331	0,095	3,473	***	

Thus, we can construct the structural equation of the model as follows:

$$Y_1 = 0{,}274*X_1 + 0{,}252*X_2 + 0{,}254*X_3 + e \quad (2)$$

$$Y_2 = 0{,}119*X_1 + 0{,}248*X_2 + 0{,}144*X_3 + e \quad (3)$$

$$Z = 0{,}055*X_1 + 0{,}199*X_2 + 0{,}331*X_3 + \quad (4)$$
$$0{,}302*Y_1 + 0{,}051*Y_2 + e$$

Based on the path diagram resulting from data processing using the Amos program, it can be done to form the equation and estimation. After

estimation and equation are formed, the Goodness of Fit Test (suitability of the model) and hypothesis testing are conducted. The testing of the Goodness of Fit Test is based on the criteria below:

Tabel 3: Test Goodness of Fit.

Indicator	Criteria	Result	Conclusion
Chi square	Smaller is better	12,113	Good
Probability	> 0,05	0,071	Good
Cmin/df	<2.0 atau <5.0	2,113	Good
RMSEA	.05≤RMSEA≤.08	0,065	Good
TLI	0,80≤GFI≤1	0,893	Marginal
CFI	0,80≤GFI≤1	0,963	Good
NFI	0,80≤GFI≤1	0,833	Marginal
GFI	0,80≤GFI≤1	0,963	Good
AGFI	0,80≤GFI≤1	0,824	Marginal

Based on Table 3. aboved, the overall equation model of path analysis used can be accepted and hypothesis testing can be continued. Furthermore, hypothesis testing is done by analyzing the significance of regression weight.

Table 4: Direct, Indirect and Total Effect.

Direct Effects	Indirect Effects	Total Effect
Green Product → Green Purchase Intention = 0,352	Green Product → Green Satisfaction → Green Purchase Intention (0,275 x 0,283 = 0,778)	0,352 + 0,778 = 1,130
	Green Product → Green Trust → Green Purchase Intention (0,150 x 0,038 = 0,006) Total	0,352 + 0,006 = 0,358 1,130+0,358 = 1,448
Green Packaging → Green Purchase Intention = 0,185	Green Packaging → Green Satisfaction → Green Purchase Intention (0,250 x 0,283 = 0,072)	0,185 + 0,072 = 0,257
	Green Packaging → Green Trust → Green Purchase Intention (0,308 x 0,038 = 0,012) Total	0,185 + 0,012 = 0,192 0,257 + 0,192= 0,449

Green Advertising → Green Purchase Intention = 0,340	Green Advertising → Green Satisfaction → Green Purchase Intention (0,279 x 0,283 = 0,079)	0,340 + 0,079 = 0,419
	Green Advertising → Green Trust → Green Purchase Intention (0,198 x 0,038 = 0,008) Total	0,340 + 0,008 = 0,348 0,419 + 0,348 =0,767

The total effect of the Green Product on Green Purchase Intention with an intervening Green Satisfaction variable of 1.130 and significant. This can interpret if the Green Product is increased by 1%, then through the intervening Green Satisfaction variable in total it will increase Green Purchase Intention by 113%.

The total effect of the Green Product on Green Purchase Intention with the intervening Green Trust variable is 0.358 and significant. This can interpret if the Green Product is increased by 1%, then through the intervening Green Trust variable in total it will increase Green Purchase Intention by 35.8%.

The total effect of Green Packaging on Green Purchase Intention with the Green Satisfaction variable is 0.257 and significant. This can interpret if the Green Product is increased by 1%, then through the intervening Green Satisfaction variable in total it will increase Green Purchase Intention by 25.7%.

The total effect of Green Packaging on Green Purchase Intention with the intervening Green Trust variable is 0.192 and significant. This can interpret if the Green Product is increased by 1%, then through the intervening Green Trust variable in total it will increase Green Purchase Intention by 19.2%.

The total effect of Green Advertising on Green Purchase Intention with the Intervening Green Satisfaction variable of 0.419 and significant. This can be interpreted if Green Advertising is increased by 1%, and through the intervening Green Satisfaction variable in total, Green Purchase Intention will increase by 41.9%.

The total effect of Green Advertising on Green Purchase Intention with the Green Trust intervening variable is 0.348 and significant. This can be interpreted if Green Advertising is increased by 1% so that through the intervening Green Trust variable in total it will increase Green Purchase Intention by 34.8%.

5 CONCLUSIONS

The consumer purchase intention model is better when using intervening variables, namely Green Satisfaction (Y1) and Green Trust (Y2). For business people, this indicates that the trend of using environmentally friendly products increasingly needs attention. The results of the study indicate that there is a tendency that consumers are now increasingly aware of the importance of the presence of environmentally friendly products. Even consumers have a preference for more environmentally friendly products.

All variables studied had a significant effect on alpha level = 5% on Green Purchase Intention (Z). The variables that have the greatest direct influence are the Green Product variable (X1) which is equal to 35.2%, followed by the Green Advertising variable (X3) of 34% and the Green Packaging variable (Y1) of 18.5%.

Compared with the estimation results by using direct influence without intervening, the estimation results using the intervening variables Green Satisfaction (Y1) and Green Trust (Y2) are far better, marked by increasing significance values and R2 values.

Based on the total direct and indirect influence, the greatest influence on the Green Purchase Intention (Z) variable is the Green Product variable (X1) with a number of 1,488. The second biggest influence is the variable Green Advertising (X3) with the number 0.767 and the smallest influence is the variable Green Packaging (X2) with the amount of 0.449.

The suggestions that can be given include: Companies should develop more green products (environmentally friendly products) because currently there is an increasing trend in the use and demand for environmentally friendly products.

The concept of environmentally friendly products is a concept that takes a long time in its implementation, companies should start directing their production orientation in a direction that is more environmentally friendly, not necessarily green overall, but can begin with small and simple things. Because the slightest effort to produce environmentally friendly products is a worthy effort. Other researchers should be able to follow up on this research by adding other aspects or other variables that are more recent and able to represent the complexity of the consumer purchase intention model, especially related to green products.

REFERENCES

Belch, G.E., Belch, M.A., 2001. *Advertising and Promotions*, Aufl. New York.

Chen, Y.S., 2010 The Drivers of Green Brand Equity: Green Brand Image, Green Satisfaction, and Green Trust. *Journal of Business Ethics. Springer Netherlands*. 93(2): 307–319.

Chen, Y., Chang, C., 2012. Enhance Green Purchase Intentions. *Management Decision. Emerald Group Publishing Limited*. 50(3): 502–520.

Chen, C.-C., Chen, C.-W., Tung, Y.-C., 2018. Exploring the Consumer Behavior of Intention to Purchase Green Products in Belt and Road Countries: An Empirical Analysis. *Sustainability*. 10(3): 854.

Deepak, J., Kant, R., 2018. Green Purchasing Behaviour: A Conceptual Framework and Empirical Investigation of Indian Consumers. *Journal of Retailing and Consumer Services*. 41: 60–69.

Draskovic, N., Temperley, J., Pavicic, J., 2009. Comparative Perceptions of Consumer Goods Packaging: Croatian Consumers Perspectives. *International Journal of Management Cases*. 11(2): 154–163.

Joshi, S., Patel, G.H., Dave, D.R., 2018 "Demographic Personality Determinants of Green Consumer Behavior in Gujarat. *International Journal of Advance Research in Computer Science and Management Studies*. 327(1). Acessed from: http://ijarcsms.com/docs/paper/volume6/issue1/V6I1-0026.pdf.

Klaiman, K., Ortega, D.L., Garnache, C., 2016. Consumer Preferences and Demand for Packaging Material and Recyclability. *Resources, Conservation and Recycling*. 115: 1–8.

Liang, L.J., Choi, H.C., Joppe, M., 2018. Exploring the Relationship Between Satisfaction, Trust and Switching Intention, Repurchase Intention in the Context of Airbnb. *International Journal of Hospitality Management*. 69: 41–48.

Mohr, L.A., Eroglu, D., dan Ellen, P.S., 1998. The Development and Testing of a Measure of Skepticism Toward Environmental Claims in Marketers' Communications. *Journal of Consumer Affairs*. 32(1): 30–55.

Nuttavuthisit, K., Thøgersen, J., 2017. The Importance of Consumer Trust for the Emergence of a Market for Green Products: The Case of Organic Food. *Journal of Business Ethics*. 140(2): 323–337.

Rokka, J., Uusitalo, L., 2008. Preference for Green Packaging in Consumer Product Choices - Do Consumers Care?. *International Journal of Consumer Studies*. 32(5): 516–525.

Rundh, B., 2009. Packaging Design: Creating Competitive Advantage with Product Packaging. *British Food Journal*. 111(9): 988–1002.

Sani, A., Vivin, M., 2013. *Metodologi Penelitian Manajemen Sumber Daya Manusia (Teori, Kuisioner dan Analisis Data)*, UIN MALIKI. Press. Malang, 2nd edition.

Wei, C.-F. *et al*., 2017. Toward Sustainable Livelihoods: Investigating the Drivers of Purchase Behavior for Green Products. *Business Strategy and the Environment*. 26(5): 626–639.

Zhang, M., Yang, L., dan Deng, P., 2018. *Sustainable Development Mode of Express Packaging Based on Green Concept*. In. Springer. Singapore. pp. 451–458.