

Conference Paper

Does Green Product Consumption Gendered? Investigating Among Millennials in an Emerging Market

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Abstract

The purpose of this study is to understand the difference in consumption patterns of green products among millennials based on a gender perspective. The marketing of these eco-friendly products to the millennials is interesting to be discussed in terms of sustainability. The sustainability is seen not only in the eco-friendly products but also from the consumers' side, as millennials are potential consumers in the present and future. A detailed marketer's understanding of millennials' consumption patterns based on gender will provide an insight into appropriate marketing strategies in the emerging market context. To meet these objectives, 326 millennials were included as respondents in the survey conducted by the researchers. The results of the analysis on the whole sample indicated that the millennials' intention of purchasing eco-friendly products is positively influenced by their attitudes toward green products, subjective norm and perceived behavioral control. Although the intention of purchasing green products between the male and female sample groups showed no different pattern, the attitude variable did not show any effect on the intention of purchasing green products in either men and women.

Keywords: green product, millennials, gender differences, emerging market, purchase intention

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1. Introduction

The global phenomenon of environmental crisis requires the attention of various parties to take part in creating sustainability, including in the field of marketing. The marketing orientation evolves quickly, not only to focus on creating superior product value for customer satisfaction, but also to able to pursue welfare for stakeholders, including the environment (Kotler & Armstrong, 2016: 34-36). Gordon, Carrigan, and Hastings (2011) summarize sustainable marketing frameworks in three forms: green marketing, social marketing and critical marketing. In the realm of green marketing, marketers

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focus on developing and marketing green products. Indonesia is a developing country and a potential emerging market for these green products.

Referring to Shao et al. (2017), consumers evaluate the product not only for its benefits, but also for the impact of the product on environmental sustainability. Consumer awareness of environmental sustainability provides space for the development of eco-friendly products' marketing (Ertz, Karakas, & Sarigollu, 2016; Mendleson & Polonsky, 1995). Consumers have a big role in supporting environmental sustainability by consuming green products. Millennials consumers are the current young consumers who are a part of potential market for eco-friendly products that will affect the environmental sustainability and sustainability of the marketing process (Setyawan et al., 2018; Yadav & Pathak, 2016). Understanding millennials' consumption patterns on environmentally friendly products becomes an important thing for marketers to determine the right marketing strategy. Based on this background, this study aims to determine the pattern of millennials' consumption in eco-friendly products and analyze it based on gender differences. The green products' pattern of consumption is explained by the Theory of Planned Behavior (TPB) framework, in which purchasing intentions are influenced by attitudes, subjective norms and perceived behavioral control (PBC).

2. Literature Review

2.1. Theory of planned behavior

In the realm of marketing, Theory of Planned Behavior possesses a robust ability to explain causal relationships of consumers' intention and behavior (Paul et al., 2016). The results of meta-analysis conducted by Scalco et al. (2017) indicate that TPB's framework excelled to explain the consumption behavior of green products compared to other theories. Riebl et al. (2015) show that the TPB model also provides a crystal-clear understanding of consumption behavior among young consumers.

Ajzen (1991) explains that the TPB framework is the development of Theory of Reason Action (TRA). Referring to the TPB framework, the individual's behavior intention is positively influenced by the individual's attitude toward a particular object, the impulse of the social environment and how much the individual is able to control himself to show that behavior. Positive influences indicate the alignment of the influence of the three elements in the TPB framework to indicate the intention of individual behavior (e.g., Martinho et al., 2015; Yadav & Pathak, 2017). The positive attitude of consumers

towards eco-friendly products will encourage the intention of buying them. Similarly, this also applies to the components of subjective norms and PBC.

Recent studies using the TPB model to explain the intent of purchasing green products generally involve attitudes, subjective norms and PBC as positive predictors and extend them with relevant predictor variables (e.g., Ko & Jin, 2017; Paul et al., 2016; Yadav & Pathak, 2017). Referring to the TPB framework (Ajzen, 1991) and some recent research on the intention of purchasing eco-friendly products, the research hypotheses are stated as follows.

H1: Attitudes positively affect the intention of purchasing green products among millennials.

H2: Subjective Norm positively affects the intention of purchasing green products among millennials.

H3: Perceived Behavioral Control positively affects the intention of purchasing green products among millennials.

2.2. Gender and green product consumption among millennials

The research involving gender roles has developed rapidly in the areas of consumer research and marketing in general. Gender differences play a psychological role for the consumers and have an impact on product evaluation, which marketers ultimately need to address in determining their marketing strategies (Bettany et al., 2010). Naturally, individual gender differences also show different consumer behaviors, which then develop into masculine and feminine terms in marketing. In the consumption behavior of green products, Silva and Pownall (2014) show that gender is an important factor affecting behavior. Gender differences also determine the significant difference of patterns of consumption of green products (e.g., Lee, 2009; Mostafa, 2007). Brough et al. (2016) state that eco-friendly products are more associated with women's gender groups and then form a stereotype that women are more concerned with sustainable consumption than men are.

Based on the literature review, the research model can be described as follows.

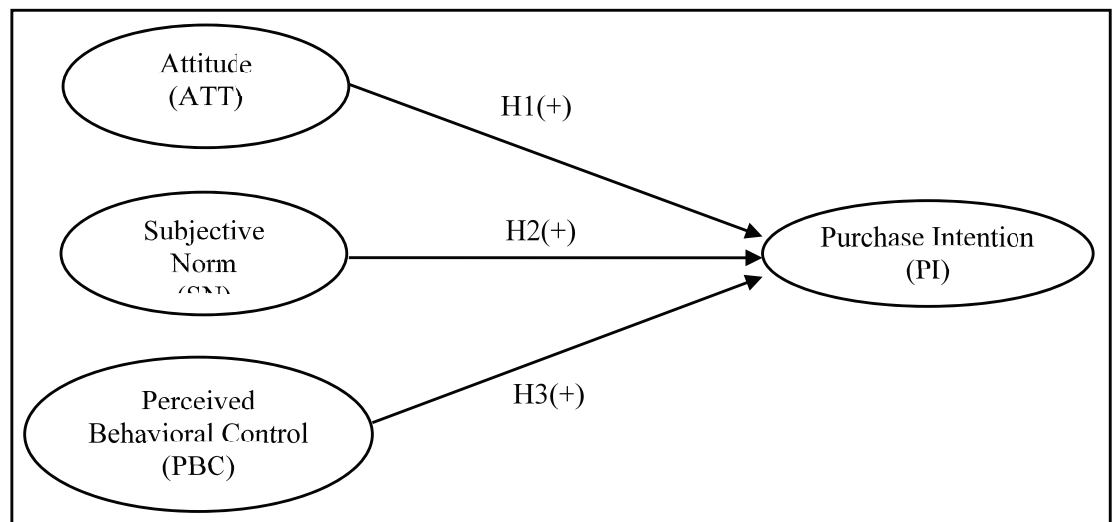


Figure 1: Research framework.

3. Methods

Researchers applied causal research, which is done by identifying the cause-and-effect relationship between the variables studied (Zikmund et al., 2013: 54). The cause-and-effect relationship is used by researchers to explain the pattern of consumption of environmentally friendly products among millennials in the TPB framework. Based on Figure 1, the intention of purchasing green products is explained through the positive influence of attitudes, subjective norms and perceived behavioral control. Attitude variables were measured by seven statement items on a semantic differential scale, adapted from Rucker and Petty (2006) and Yadav and Pathak (2016). The other three variables were measured using a 5-point Likert scale adapted from van Birgelen et al. (2009), Yadav and Pathak (2016) and Prakash and Pathak (2017).

The research data were obtained by survey using purposive sampling technique. Purposive sampling allows researchers to select respondents who meet certain criteria in order to achieve research objectives (Sekaran & Bougie, 2016: 248). The criteria are classified as young consumers - millennials with minimum of high school graduates who are aware of the consumption of eco-friendly products. A total of 326 millennials respondents who are undergraduate students were involved in this study. Furthermore, the research data obtained were analyzed descriptively or inferentially. Inferential statistical analysis includes independent t-test and relationship analysis among variables using Structural Equation Modeling (SEM) technique.

4. Results and Discussion

Descriptively, 326 respondents involved in this study consisted of 164 male respondents (50.3%) and 162 female (49.7%). The number of male and female respondents in this study was relatively balanced, so it was worth to be compared with the pattern of its consumption of green products. The comparison between the samples was analyzed based on the difference of the average variable with the independent t-test and the relationship between the variables and the SEM technique.

The SEM analysis technique applied refers to the two-step approach proposed by Anderson and Gerbing (1988). The two-step approach of SEM includes the measurement model stage (confirmatory factor analysis - CFA) to show the validity and reliability of the data, as well as the structural model stage to determine the relationship between the hypothesized variables.

TABLE 1: Result of measurement model.

Constructs	Standardized Factor Loading (λ)	Average Variance Extracted (AVE)	Construct Reliability (CR)	Remarks
Attitude (ATT)				
ATT1	0.722	0.546	0.893	Valid & Reliable
ATT2	0.543			Valid & Reliable
ATT3	0.775			Valid & Reliable
ATT4	0.805			Valid & Reliable
ATT5	0.791			Valid & Reliable
ATT6	0.774			Valid & Reliable
ATT7	0.731			Valid & Reliable
Subjective Norm (SN)				
SN1	0.798	0.589	0.895	Valid & Reliable
SN2	0.838			Valid & Reliable
SN3	0.845			Valid & Reliable
SN4	0.729			Valid & Reliable
SN5	0.655			Valid & Reliable
SN6	0.723			Valid & Reliable
Perceived Behavior Control (PBC)				
PBC1	0.768	0.612	0.887	Valid & Reliable
PBC2	0.746			Valid & Reliable
PBC3	0.759			Valid & Reliable
PBC4	0.851			Valid & Reliable
PBC5	0.782			Valid & Reliable
Purchase Intention (PI)				

Constructs	Standardized Factor Loading (λ)	Average Variance Extracted (AVE)	Construct Reliability (CR)	Remarks
PI1	0.729	0.604	0.901	Valid & Reliable
PI2	0.851			Valid & Reliable
PI3	0.790			Valid & Reliable
PI4	0.764			Valid & Reliable
PI5	0.687			Valid & Reliable
PI6	0.830			Valid & Reliable

Using the AMOS 23 software, SEM stage 1 (measurement model) showed an adequate level of goodness of fit ($\chi^2/df = 1.922$, RMSEA = 0.053, GFI = 0.897, CFI = 0.960, and TLI = 0.952). The results of the measurement model in Table 1 showed that all research variables have met the value of validity and reliability. The level of validity is indicated by the standardized factor loading and AVE minimum of 0.5 (Hair et al., 2010: 709). A CR score of at least 0.6 indicates good reliability (Hair et al., 2010: 710).

TABLE 2: Comparison between male and female samples.

Variables	Male ($n = 164$)		Female ($n = 162$)		Independent t-test	
	Mean	SD	Mean	SD	t	Sig.
Attitude (ATT)	4.212	0.540	4.409	0.500	-3.424	0.001***
Subjective Norm (SN)	3.795	0.608	3.824	0.775	-0.381	0.704
Perceived Behavior Control (PBC)	3.910	0.600	3.882	0.707	0.389	0.697
Purchase Intention (PI)	3.774	0.617	3.860	0.609	-1.262	0.208

Notes: *** $p \leq 0.01$

Table 2 shows the average test result of the research variables between the male and female samples. Attitudes toward eco-friendly products in women were significantly higher than in men. Although the mean of other variables, such as subjective norms and purchase intention, appeared to be higher in women, it did not show significant difference compared to the men’s group. Similarly, PBC variables were also unable to show significant mean differences between male and female samples of millennials. Next, the researchers constructed the structural stage model to perform hypotheses testing.

The structural model of all samples shown in Table 3 had an adequate goodness of fit value ($\chi^2/df = 1.922$, RMSEA = 0.053, GFI = 0.897, CFI = 0.960, and TLI = 0.952). The result of structural analysis of the model on the whole sample showed that the three elements of TPB had positive and significant effect on the intention of purchasing green products. Nevertheless, the results of structural analysis of models on split samples of men and women indicated that attitude was not able to influence the intention of

TABLE 3: Result of structural model.

Hypothesis	Path between constructs	Standardized Estimates	Critical Ratio	P-value	Remarks
All sample (n = 326)					
H1(+)	ATT → PI	0.068	1.662	0.097*	H1 supported
H2(+)	SN → PI	0.401	5.951	***	H2 supported
H3(+)	PBC → PI	0.514	7.519	***	H3 supported
Male sample (n = 164)					
H1(+)	ATT → PI	0.014	0.223	0.823	H1 not supported
H2(+)	SN → PI	0.531	3.862	***	H2 supported
H3(+)	PBC → PI	0.421	3.651	***	H3 supported
Female sample (n = 162)					
H1(+)	ATT → PI	0.025	0.430	0.667	H1 not supported
H2(+)	SN → PI	0.361	4.400	***	H2 supported
H3(+)	PBC → PI	0.573	6.299	***	H3 supported
Notes: *P-value ≤ 0.1, **P-value ≤ 0.05, ***P-value ≤ 0.01.					

purchasing green products. The results shown in Table 3 presented a unique outcome, in which the three predictor intentions portrayed a positive and significant influence in the overall context of the sample yet displayed different results on split samples by gender.

5. Conclusion

The results showed that the pattern of consumption of green products among millennials did not show any significant differences based on gender perspective. The attitude variable failed to show a positive influence on the intention of purchasing eco-friendly products, both in the sample groups of male and female millennials. The results provided insight for the marketers of green products to determine the accurate marketing strategy for the millennials.

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References

- [1] Ajzen, I. 1991. The theory of planned behavior. **Organizational Behavior and Human Decision Processes**, 50: 179-211.
- [2] Anderson, J. C., & Gerbing, D. W. 1988. Structural equation modeling in practice: A review and recommended two-step approach. **Psychological Bulletin**, 103: 411-423.
- [3] Bettany, S., Dobscha, S., O'Malley, L., & Prothero, A. 2010. Moving beyond binary opposition: Exploring the tapestry of gender in consumer research and marketing. **Marketing Theory**, 10: 3-28.
- [4] Brough, A. R, Wilkie, J. E. B., Ma, J., Isaac, M. S., & Gal, D. 2016. Is eco-friendly unmanly? The green-feminine stereotype and its effect on sustainable consumption. **Journal of Consumer Research**, 43: 567-582.
- [5] Ertz, M., Karakas, F., & Sarigöllü, E. 2016. Exploring pro-environmental behaviors of consumers: An analysis of contextual factors, attitude, and behaviors. **Journal of Business Research**, 69: 3971-3980.
- [6] Gordon, R., Carrigan, M., & Hastings, G. 2011. A framework for sustainable marketing. **Marketing Theory**, 11: 143-163.
- [7] Hair Jr, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. 2010. **Multivariate data analysis** (7th ed.). Englewood Cliffs, NJ: Prentice-Hall.
- [8] Ko, S. B., & Jin, B. 2017. Predictors of purchase intention toward green apparel products: A cross-cultural investigation in the USA and China. **Journal of Fashion Marketing and Management: An International Journal**, 21: 70-87.
- [9] Kotler, P., & Armstrong, G. 2016. **Principles of marketing** (16th ed.). Pearson Education Ltd.
- [10] Lee, K. 2009. Gender differences in Hong Kong adolescent consumers' green purchasing behavior. **Journal of Consumer Marketing**, 26: 87-96.
- [11] Martinho, G., Pires, A., Portela, G., & Fonseca, M. 2015. Factors affecting consumers' choices concerning sustainable packaging during product purchase and recycling. **Resources, Conservation and Recycling**, 103: 58-68.
- [12] Mendleson, N., & Polonsky, M. J. 1995. Using strategic alliances to develop credible green marketing. **Journal of Consumer Marketing**, 12: 4-18.
- [13] Mostafa, M. M. 2007. Gender differences in Egyptian consumers' green purchase behaviour: The effects of environmental knowledge, concern and attitude. **International Journal of Consumer Studies**, 31: 220-229.

- [14] Paul, J., Modi, A., & Patel, J. 2016. Predicting green product consumption using theory of planned behavior and reasoned action. **Journal of Retailing and Consumer Services**, 29: 123-134.
- [15] Prakash, G., & Pathak, P. 2017. Intention to buy eco-friendly packaged products among young consumers of India: A study on developing nation. **Journal of Cleaner Production**, 141: 385-393.
- [16] Riebl, S. K., Estabrooks, P. A., Dunsmore, J. C., Savla, J., Frisard, M. I., Dietrich, A. M., Peng, Y., Zhang, X., & Davy, B. M. 2015. A systematic literature review and meta-analysis: The theory of planned behavior's application to understand and predict nutrition related behaviors in youth. **Eating Behaviors**, 18: 160-178.
- [17] Rucker, D. D., & Petty, R. E. 2006. Increasing the effectiveness of communications to consumers: Recommendations based on elaboration likelihood and attitude certainty perspectives. **Journal of Public Policy & Marketing**, 25: 39-52.
- [18] Scalco, A., Noventa, S., Sartori, R., & Ceschi, A. 2017. Predicting organic food consumption: A meta-analytic structural equation model based on the theory of planned behavior. **Appetite**, 112: 235-248.
- [19] Sekaran, U., & Bougie, R. 2016. **Research methods for business: A skill building approach** (7th ed.). John Wiley & Sons Ltd.
- [20] Setyawan, A., Noermijati, N., Sunaryo, S., & Aisjah, S. 2018. Green-product buying intentions among young consumer: Extending the application of Theory of Planned Behavior. **Problems and Perspectives in Management**, 16: 145-154.
- [21] Shao, J., Taisch, M., & Mier, M. O. 2017. Influencing factors to facilitate sustainable consumption: From the experts' viewpoints. **Journal of Cleaner Production**, 142: 203-216.
- [22] Silva, D. G. D., & Pownall, R. A. J. 2014. Going green: Does it depend on education, gender or income? **Applied Economics**, 46: 573-586.
- [23] van Birgelen, M., Semeijn, J., & Keicher, M. 2009. Packaging and proenvironmental consumption behavior investigating purchase and disposal decisions for beverages. **Environmental Behavior**, 41: 125-146.
- [24] Yadav, R., & Pathak, G. S. 2016. Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior. **Journal of Cleaner Production**, 135: 732-739.
- [25] Yadav, R., & Pathak, G. S. 2017. Determinants of consumers' green purchase behavior in a developing nation: Applying and extending the theory of planned behavior. **Ecological Economics**, 134: 114-122.

- [26] Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. 2013. **Business research methods** (9th ed.). New York, NY: McGraw-Hill.