The effect of campaign of the plastic bag use reduction policy toward "green behavior" of Bogor City society

Carolin Lulik Tafsia[a], Sri Mulatsih[b], Sumardjo[c]

[a] Natural Resources and Environmental Management Study Program, Graduate School, IPB University, Baranangsiang Campus IPB, 16127, Indonesia [+62 251-8332779]
[b] Department of Economics, Faculty of Economics and Management, IPB University, IPB Dramaga Campus, Bogor, 16680, Indonesia [+62 251-8626602]
[c] Department of Communication Science and Community Development, Faculty of Human Ecology, IPB University, IPB Dramaga Campus, Bogor, 16680, Indonesia [+62 251-8420252]

Corresponding Author:
Carolin Lulik Tafsia
Natural Resources and Environmental Management
Study Program, Graduate School, IPB University;
Tel.+6281392656762
Email:
carolinlulik@apps.ipb.ac.id

Abstract. *The Municipal Government of Bogor City issued a regulation in reducing the use of plastic bags to decrease the volume of plastic waste in Bogor City. The regulation has been implemented since December 1st, 2018. This study aims to find out the influence of campaign policy on the awareness, attitudes, and actions of Bogor City society in reducing the use of plastic bags. This study uses the analysis method of Structural Equation Modeling (SEM). The result of this study demonstrates that there is a positive relationship between policy campaigns towards the forming of awareness, attitudes, and actions of Bogor City society in reducing the use of plastic bags. In addition, awareness and eco-friendly attitudes also have a positive influence on the forming of actions to reduce the use of plastic bags. Therefore, for the policy to run effectively, it is necessary to increase policy campaigns to increasingly heighten awareness, attitudes, and actions of the Bogor City society in reducing the use of plastic bags.*

How to cite (CSE Style 8th Edition):
Tafsia CL, Mulatsih S, Sumardjo. 2022. The effect of campaign of the plastic bag use reduction policy toward "green behavior" of Bogor City society. JPSL **12**(1): 55-63. http://dx.doi.org/10.29244/jpsl.12.1.55-63.

INTRODUCTION

The development of science and technology has influenced people's lifestyles. These lifestyle changes are characterized by the increasing use of products that are not eco-friendly (Utami, 2020) and produce waste. Today, garbage is one of the environmental problems faced by all countries in the world. Increasing landfills are closely related to population growth, economic growth, and changes in public consumption patterns (Law No. 18 of 2018 concerning Waste Management; Sudirman and Phradiansah, 2019). Plastic waste becomes one type of waste necessarily addressed immediately. If it is managed improperly, plastic waste has a long-term harmful impact on the environment. Jambeck *et al.* (2015) Indonesia is the second-largest contributor of plastic waste in the world's oceans. Plastic bags have become one of the contributors to plastic waste. This matter is because plastic bags have become an inseparable item within human life because of their light, practical nature and can be used as containers to carry groceries.

Bogor city is one of the cities having problems in terms of waste management. Landfills are increasing in tandem with population growth. Based on the 2021 data of BPS West Java, the population in Bogor City in 2019 was 1 112 081 people. It increased by 1.39% compared to the previous year. In the same period,

landfills increased by 2.47% from 179 528 tons in 2018 (Environment Service of Bogor City, 2021). Data from the national waste management information system in 2017-2018 showed that plastic waste accounted for 13% and became the second-largest contributor after food waste (Arvan, 2019). Therefore, the Bogor City Government issued Bogor Mayor Regulation Number 61 of 2018 on Reducing the Use of Plastic Bags, accompanied by *Bogor Tanpa Kantong Plastik* "*BOTAK*" program. The regulation bans all modern stores and shopping centers in Bogor City from providing plastic bags since December 1st, 2018.

Bogor City Government's policy on reducing the use of plastic bags is one of the movements that offer lifestyle changes and green behavior. Eco-friendly behavior plays a significant role in saving the environment from plastic waste pollution. For the policy to run effectively, policymakers must socialize massively to provide information and a well-understanding to the public about that policy. Some studies show that campaigns can increase more eco-friendly people's awareness, attitudes, and behaviors (Novianti and Kartika, 2017; Nurulhaq and Kismartini, 2019). Studies conducted by Wu and Chen (2014), Ajzen (1991) showed that eco-friendly awareness positively affects eco-friendly attitudes and behaviors. Furthermore, a positive attitude of the pro-environment will influence one's behavior to be more eco-friendly (Lee, 2008; Jekria and Daud, 2016).

This study aims to prove whether the policy campaign of the use of plastic bags reduction conducted by the Bogor City Government can convince the community to be eco-friendly, then behave and take eco-friendly actions. The results are used for providing policy input to the Bogor City Government in reducing the use of plastic bags.

METHOD OF STUDY

Method of Collecting Data

The research was conducted in Bogor city from January to March 2021 in 210 respondents with the criteria: the respondents are people living in Bogor city that have received campaign of Bogor Mayor Regulation No. 61 of 2018 on reducing the use of plastic bags and the *Bogor Tanpa Kantong Plastik "BOTAK"* program and have conducted shopping activities in supermarkets, modern stores, and retail within the last year. The sampling method used was snowball sampling techniques by sharing questionnaires compiled in Google form through WhatsApp media. The questionnaire link was shared with six respondents who are researcher's friends, then those six respondents shared the link randomly to other respondents-Bogor City society that has above-mentioned criteria. From the total respondents, the sample number of 151 people met the minimum limit of SEM analysis. The number is more or less five times the number of manifest variables. The number of manifest variables used is 24 variables. Thus the minimum sample count is 120.

Method of Analyzing Data

This research uses Structural Equation Modelling (SEM) analysis method. SEM is a multi-variable statistical technique that combines factor analysis and regression to analyze relationships between variables. There are two variables in SEM, namely latent variable and manifest variable (indicator). A latent variable is a variable that cannot be directly measured; however, it can be known from its indicators, while a manifest variable is a variable that can be directly measured (Singgih, 2018). The latent variables used in this study were the policy campaign of the use of plastic bag use in Bogor City, awareness, attitudes, and eco-friendly actions. The manifest variables in this study consisted of 8 indicators of policy campaign of the use of plastic bag reduction, of 5 indicators of eco-friendly awareness, of 4 indicators of eco-friendly attitudes, and of 7 indicators of eco-friendly actions. Figure 1 shows the initial structural model (SEM) used in this study.

Latent variables in SEM are divided into exogenous latent variables and endogenous latent variables. Exogenous variables in this study are the policy campaign of the use of plastic bag use reduction in Bogor City, awareness, and eco-friendly attitudes, while endogenous variables are eco-friendly actions. The Confirmatory Factor Analysis stage (CFA) evaluates the conformity of data with the model. This study used

a program, SPSS AMOS version 24, for CFA analysis. The model evaluation of "goodness of fit" examines the whole model. Eight indicators used to see the model's conformity are Chi-square, Probability, RMSEA, GFI, AGFI, CFI, CMIN/DF, and TLI. If the indicator value of the model's conformity meets the cut-off value, thus the model is said to be "good-fit". While reliability test using Construct Reliability (CR), with CR value criteria is CR≥0.70, and validity test using Variance Extracted (VE) test with VE≥0.50 value criteria. The operational variables in this study are as follows:

1. Policy campaign is campaign by face-to-face (Sos1), through social media (Sos2), through banners (Sos3), newspapers (Sos4), electronic media (Sos5), and self-service stores (Sos6, Sos7, Sos8).
2. Eco-friendly awareness is understanding the impact of plastic bag reduction on the environment by reducing the use of non-reusable plastic bags (K1, K2, K3), collecting and reusing obtained plastic bags (K4), and not using plastic bags at all (K5).
3. Eco-friendly attitude is the feeling of discomfort in using non-reusable plastic bags by reducing the use of non-reusable plastic bags (S1, S2), collecting and reusing obtained plastic bags (S3), and not using plastic bags at all (S4).
4. Eco-friendly action is to reduce the use of non-reusable plastic bags (T1, T2, T4, T5, T6), collect and reuse plastic bags (T3), and not use plastic bags at all (T7).
5. Each indicator is measured using a Likert scale: 1 (strongly disagree), 2 (disagree), 3 (simply agree), 4 (agree), 5 (strongly agree).
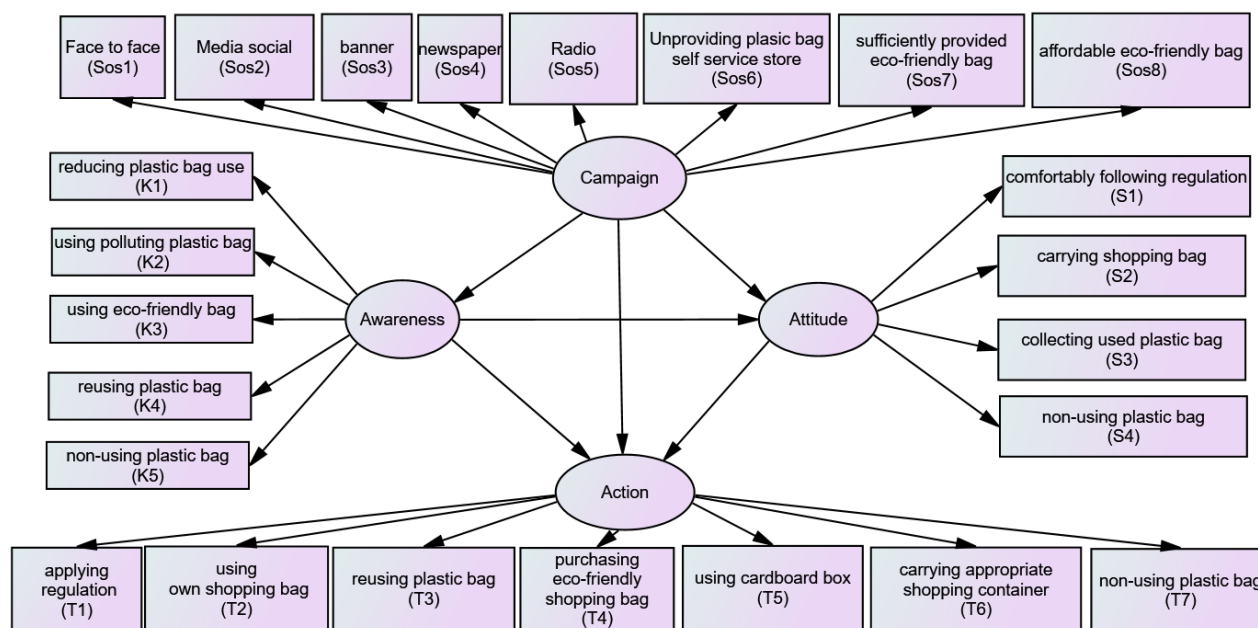

Figure 1 Structural Model (SEM) of policy campaign influence of the use of plastic bag reduction in Bogor City toward green behavior's society

RESULT AND ANALYSIS

The number of respondents who met the criteria of this study was 151 people. Respondents with gender female (66.23%) compared to the male gender. The majority of respondents were aged 25-34 years (31.13%) in married respondents (61.59%) are more than unmarried. The distribution of undergraduate education is much dominant; it is 63.58%, with employment status dominated by private employees at 29.80%. The result of Yudistirani *et al.*'s (2015) research suggested that age and education affect eco-friendly behavior, namely, waste sorting. Eco-friendly behavior is more carried out by people under 30 with equivalent to undergraduate education.

Analysis of Confirmatory Factor Analysis (CFA)

The whole testing of SEM models is intended to test the confirmatory between data and models. Evaluation of confirmatory model test in this study uses confirmatory factor analysis (CFA). The results show that the initial model does not meet the criteria of the existing cut of value (Table 1), so it is necessary to modify the research model to obtain a good research model that can be continued to the next stage. The second model was modified by removing the Sos7, K4, S3, T3, T5, and T7 indicators, resulting in a better "good of fit" model than the previous model (Table 1).

Table 1 CFA test the first model and the second model

Goodness of fit index	Cut off value	Model 1		Model 2		Model Information
		Result	Category	Result	Category	
Chi Square	Low-value expected	462.509	*Bad fit*	151.906	*Good fit*	Model 2
Significance Probability	≥0.05	0	*Bad fit*	0.082	*Good fit*	Model 2
GFI	≥0.90	0.779	*Bad fit*	0.902	*Good fit*	Model 2
CFI	≥0.90	0.864	*Bad fit*	0.979	*Good fit*	Model 2
AGFI	≥0.90	0.730	*Bad fit*	0.870	*Marginal fit*	Model 2
TLI	≥0.90	0.848	*Bad fit*	0.975	*Good fit*	Model 2
RMSEA	≤0.08	0.077	*Good fit*	0.034	*Good fit*	Model 1/ Model 2
CMIN/DF	≤2.00	1.880	*Good fit*	1.178	*Good fit*	Model 1/ Model 2

Table 2 Regression weight and standardized regression weight

Indicator	Regression Weight				Standardized Regression Weight			
	Model 2	Category	Model 3	Category	Model 2	Category	Model 3	Category
Sos1	***	Significant	***	Significant	0.563	Valid	0.572	Valid
Sos2	***	Significant	***	Significant	0.616	Valid	0.631	Valid
Sos3	***	Significant	Drop	-	0.408	Unvalid		-
Sos4	***	Significant	***	Significant	0.772	Valid	0.787	Valid
Sos5	***	Significant	***	Significant	0.797	Valid	0.783	Valid
Sos6	***	Significant	Drop	-	0.315	Unvalid	Drop	-
Sos8	0.053	Unsignificant	Drop	-	0.177	Valid	Drop	-
K1	***	Significant	***	Significant	0.756	Valid	0.756	Valid
K2	***	Significant	***	Significant	0.902	Valid	0.902	Valid
K3	***	Significant	***	Significant	0.803	Valid	0.803	Valid
K5	***	Significant	***	Significant	0.707	Valid	0.707	Valid
S1	***	Significant	***	Significant	0.731	Valid	0.729	Valid
S2	***	Significant	***	Significant	0.827	Valid	0.827	Valid
S4	***	Significant	***	Significant	0.651	Valid	0.652	Valid
T1	***	Significant	***	Significant	0.855	Valid	0.855	Valid
T2	***	Significant	***	Significant	0.856	Valid	0.856	Valid
T4	***	Significant	***	Significant	0.503	Valid	0.503	Valid
T6	***	Significant	***	Significant	0.773	Valid	0.772	Valid

Table 2 shows the "output regression weight" and "standardized regression weight" of the second and the third CFA models. Based on the results of the "output regression weight", it is known that the indicators of exogenous and endogenous constructs in the second CFA model are not entirely significant because the indicator of Sos8 has a value P≥0.05. In the "standardized regression weight" obtained, the indicator of the second CFA model is entirely invalid because there is the value of the loading factor standard of ≤0.5. So it must discard some indicators that have a value of loading factor ≤0.5, which are the indicators of Sos3, Sos6, and Sos8. Having discarded several indicators, all indicators in the exogenous and endogenous constructs obtained in the third CFA models are entirely significant because all indicators have a P≤ value of 0.05 or a *** sign. And all indicators can be said to be valid because they have the value of loading factor standard of ≥0.05. The feasibility test shows that the third CFA model has a goodness of fit, as it has a probability value (P) ≥0.05, which is 0.242, and so do the other indicators. The results of the third model's goodness of fit test can be seen in Table 3.

Table 3 CFA test the third model

Goodness of Fit Index	Cut off value	Result	Category
Chi Square	Low-value expected	92.692	Good fit
Significance Probability	≥0.05	0.242	Good fit
GFI	≥0.90	0.928	Good fit
CFI	≥0.90	0.992	Good fit
AGFI	≥0.90	0.897	Marginal fit
TLI	≥0.90	0.989	Good fit
RMSEA	≤0.08	0.026	Good fit
CMIN/DF	≤2.00	1.103	Good fit

The Structural Equation Modeling (SEM-AMOS) Analysis

The Maximum Likelihood (ML) estimation method is a structural equation technique used in this study. Then, SEM Analysis was made after making the CFA analysis. From the output regression weight obtained, the indicator of the SEM full-model is entirely significant because of the CR value ≥1.96 with a probability value (P)≤0.05. The result of standardized regression weights shows that the indicators in the SEM full-model are entirely valid, as the value of the loading factor standard is ≥0.5, thus there is no need to discard the indicator for further analysis.
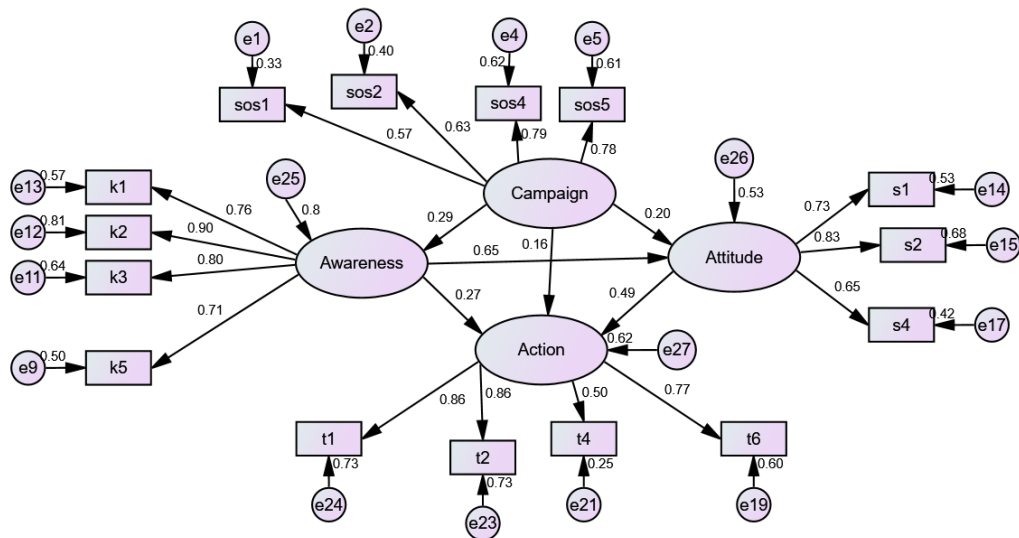

Figure 2 Structural model and loading factor value, variable: campaign, awareness, attitude, and action

Based on the feasibility test of the SEM full-model, it was obtained that the path diagram in Figure 2 is "good fit" because the chi-square value is 92.69 with a probability value of 0.242, so the model proposed in this study can be used for the hypothesis test. Reliability tests (CR) show that all variables have a CR ≥0.70 value, indicating that all indicators have a good level of reliability. Validity tests (VE) show that all have a ≥0.50 value, suggesting that all indicators can be used to measure each variable. The results of validity and reliability tests can be seen in Table 4.

Table 4 Validity test (VE) and reliability test (CR)

Indicator	*Loading Factor*	VE	CR
Sos1	0.572	0.615	0.862
Sos2	0.631		
Sos4	0.787		
Sos5	0.783		
K1	0.756	0.752	0.923
K2	0.902		
K3	0.803		
K5	0.707		
S1	0.729	0.674	0.860
S2	0.827		
S4	0.652		
T1	0.855	0.695	0.898
T2	0.856		
T4	0.503		
T6	0.772		

Hypothesis Test

The hypothesis test is used to determine whether exogenous variables affect endogenous variables. The hypothesis test is accepted if the probability has a value (P) ≤0.05 and the critical ratio (CR) has a value ≥1.96. The relationship between constructs in the hypothesis test is presented in Table 5. Table 5 shows all of the hypotheses are accepted because the probability value is (P) ≤0.05 with a value of CR ≥1.96, which indicates that exogenous variables affect endogenous variables.

Table 1 Hypothesis

Hypothesis	*Estimate*	C.R	P	Conclusion
Campaign → Awareness	0.336	2.831	0.005	Accepted hypothesis
Campaign → Attitude	0.168	2.207	0.027	Accepted hypothesis
Campaign → Action	0.169	1.975	0.048	Accepted hypothesis
Awareness → Attitude	0.480	5.985	***	Accepted hypothesis
Awareness → Action	0.246	2.380	0.017	Accepted hypothesis
Attitude → Action	0.606	3.746	***	Accepted hypothesis

Table 5 shows that the policy campaign of the use of plastic bags reduction in Bogor city positively affects eco-friendly awareness by 0.29. This research is in line with Hendarsyah *et al.* (2020). It is said that the better the campaign of policies is carried out, the higher the awareness of green consumer behavior of the community. The campaign is done to influence public awareness by informing the purpose of the campaign, availability of products, and benefits of using eco-friendly products (Joshi and Rahman, 2015). Based on the results of this study, it can be known that the policy campaign of the use of plastic bag reduction has a significant role in raising public awareness in reducing the use of plastic bags.

This study also showed that the policy campaign of the use of plastic bags reduction in Bogor city positively influenced eco-friendly attitudes by 0.20. This finding is in line with Zen *et al.* (2013) that the policy campaign of banning the use of plastic bags conducted through the campaign of days without plastic bags received good support from the public so that it showed a positive attitude from the community. Research of Afroz *et al.* (2016) proves that someone who gets information from a day campaign without plastic bags will show a good attitude by doing plastic recycling activities. From this study, it can be known that the policy campaign of the use of plastic bag reduction could improve the attitude of the society of Bogor City to be more concerned about the impact of plastic bag use on the environment.

The policy campaign of the use of plastic bags reduction in Bogor city also positively influenced eco-friendly actions by 0.16. This study is in line with Hendarsyah *et al.* (2020), which shows that the campaign positively influences the formation of eco-friendly behavior. It is because the campaign has a significant role in demonstrating an understanding of eco-friendly products so that the community will have positive behavior in using eco-friendly products. Policy campaign of banning the use of plastic bag will run effectively if the process of campaign is added with information on the issue of using plastic bags danger in the environment (Nurulhaq and Kismartini, 2019; Sharp *et al.*, 2010). The results showed that the policy campaign of the use of plastic bag reduction in the city of Bogor could increase the actions of the society of Bogor City in reducing the use of plastic bags.

This study shows that eco-friendly awareness positively affects eco-friendly attitudes by 0.65. The result is also in line with Laksmi and Wardana (2015) findings that environmental awareness influences consumer attitudes in using eco-friendly products. Saricam and Sahin (2015) found that attitudes to protecting the environment increased because it was influenced by environmental awareness. This research proves that a person has the awareness to preserve the environment, and then the person will have a positive attitude to participate in reducing the use of plastic bags.

Eco-friendly awareness also positively influenced eco-friendly actions by 0.27. This result is in line with Zheng *et al.*'s opinion (2018) that eco-friendly behavior and respect for the environment are formed because it is influenced by community awareness of the importance of protecting the environment. Consumer awareness in using eco-friendly products plays a significant role in the purchasing behavior of eco-friendly products (Siringi, 2012). The result shows that the action of the plastic bag use reducing in a person is influenced by environmental awareness.

This study also proved that eco-friendly attitudes positively influenced eco-friendly actions by 0.49. This result is in line with Uddin and Khan (2018), eco-friendly attitude will affect one's behavior to buy eco-friendly products. According to Khan *et al.* (2020), an eco-friendly attitude in a person has a significant and positive effect on a community's green behavior. Eco-friendly attitudes and behaviors arise because they are influenced by the policy implementation of the use of plastic bag reduction. Based on the results, it can be concluded that a person who has an attitude of caring for the environment will tend to commit the action in reducing plastic bag use.

CONCLUSION

The establishment of green behavior of Bogor City society is influenced by the campaign of Bogor Mayor Regulation No. 61 of 2018 on reducing the use of plastic bags, awareness, and eco-friendly attitudes. The policy campaign of the use of plastic bags reduction also positively affects the building of eco-friendly awareness and attitudes. Newspapers became a medium of a campaign of Bogor Mayor Regulation No. 61 of 2018 that has the most influence on the formating of eco-friendly awareness, attitudes, and actions. Therefore, newspapers can be used as an effective campaign medium to increase awareness, attitudes, and actions of the society of Bogor City in reducing the use of plastic bags so that the objectives of Bogor Mayor Regulation No. 61 of 2018 can be achieved.

ACKNOWLEDGMENT

REFERENCES

[BPS] Badan Pusat Statistik West Java. 2021. *Jumlah Penduduk Menurut Kabupaten/Kota (Jiwa), 2018-2020* [Internet]. [accessed 2021 Jul 7]. Availabe at: https://jabar.bps.go.id/indicator/12/133/1/jumlah-penduduk-menurut-kabupaten-kota.html.

Afroz R, Rahman A, Masud MM, Akhtar R. 2016. The knowledge, awareness, attitude and motivational analysis of plastic waste and household perspective in Malaysia. *Environmental Science and Pollution Research*. 24(3): 2304-2315. doi: 10.1007/s11356-016-7942-0.

Ajzen I. 1991. The theory of planned behavior. *Organizational Behavior and Human Decision Processes*. 50(1991): 179-211.

Arvan. 2019. *Investor Inggris Lirik Kota Bogor, Bisa Ubah Sampah Plastik Jadi Solar* [Internet]. [accessed 2021 Apr 21]. Availble at: https://kotabogor.go.id/index.php/show_post/detail/11694.

Bogor Mayor Goverment. 2018. Peraturan Wali Kota Bogor No. 61 Tahun 2018 tentang Pengurangan Penggunaan Kantong Plastik. Bogor (ID): Secretariat of Mayor Bogor.

Environment Service of Bogor City. 2021. *Laporan Data Sampah Terangkut* [Internet]. [accessed 2021 Jul 7]. Available at: https://dinaslingkunganhidup.kotabogor.go.id/index.php/ragam_data#.

Hendarsyah R, Sumarwan U, Yulianti LN. Green Consumer Behavior Masyarakat Kota Bogor dalam tata laksana sampah plastik. *Jurnal Ilmu Keluarga dan Konsumen*. 13(2): 187-198. doi: 10.24156/jikk.2020.13.2.187.

Indonesian government. 2018. Undang-Undang No. 18 Tahun 2018 tentang Pengelolaan Sampah. Jakarta (ID): State Secretariat of Indonesia.

Jambeck JR, Geyer R, Wilcox C, Siegler TR, Perryman M, Andrady A, Naratyan R, Law KL. 2015. Plastic waste inputs from land into the ocean. *American Association for the Advancement of Science* 347: 768-771. doi: 10.1126/science. 1260352.

Jekria N, Daud S. 2016. Environmental concern and recycling behaviour. *Procedia Economics and Finance*. 35: 667-673. doi: 10.1016/S2212-5671(16)00082-4.

Joshi Y, Rahman Z. 2015. Factors affecting green purchase behavior and future research directions. *International Strategic Management Review*. 3(1-2): 128-143. doi: 10.1016/j.ism.2015.04.001.

Khan MS, Saengon P, Alganad AMN, Chongcharoen D, Farruk M. 2020. Consumer green behavior: An approach towards environmental sustainability. *Sustainable Development*. 28(5): 1168-1180. doi: 10.1002/sd.2066.

Laksmi AD, Wardana IM. 2015. Peran sikap dalam memediasi pengaruh kesadaran lingkungan terhadap niat beli produk ramah lingkungan. *Jurnal Manajemen Unud*. 4(7): 1902-1917.

Lee K. 2008. Opportunities for green marketing: Young consumers. *Emerald*. 26(6): 573-586. doi: 10.1108/02634500810902839.

Novianti AI, Kartika L. 2017. Pengaruh green marketing kebijakan kantong plastik berbayar terhadap green behaviour masyarakat Kota Bogor. *Jurnal Riset manajemen dan Bisnis*. 2(1): 81-94.

Nurulhaq H, Kismartini. 2019. The effect of green marketing of plastic bag ban policy in modern retail stores on consumer green behavior in Bogor City. *ICENIS*. doi: 10.1051/e3sconf/201912508003.

Saricam H, Sahin SH. 2015. The relationship between the environmental awareness, environmental attitude, curiosity and exploration in highly gifted students: Structural equation modelling. *Educational Process: International Journal*. 4(1-2): 7-17. doi: 10.12973/edupij.2015.412.1.

Sharp A, Høj S, Wheeler M. 2010. Proscription and its impact on anti-consumption behavior and attitudes: The case of plastic bags. *Journal of Consumer Behavior*. 9: 470-484. doi: 10.1002/cb.335.

Singgih S. 2018. *Konsep Dasar dan Aplikasi SEM dengan Amos 24*. Jakarta (ID): PT Elex Media Komputindo.

Siringi RK. 2012. Determinants of green consumer behavior of post graduate teachers. *IOSR Juornal of Business and Management*. 6(3): 19-25. doi: 10.9790/487x-0631925.

Sudirman FA, Phradiansah. 2019. Tinjauan implementasi pembangunan berkelanjutan: Pengelolaan sampah Kota Kediri. *Jurnal Sosial Politik*. 5(2): 291-305. doi: 10.22219/sospol.v5i2.9821.

Uddin SMF, Khan MN. 2018. Young consumer's green purchasing behaviour opportunities for green marketing. *Journal of Global Marketing*. 31(4): 1-12. doi: 10.1080/08911762.2017.107982.

Utami KS. 2020. Green Consumers Behavior: Perilaku konsumen dalam pembelian produk ramah lingkungan. *Jurnal Maksipreneur*. 9(2): 208-223. doi: 10.30588/jmp.v9i2.499.

Wu SI, Chen JY. 2014. A model of green consumption behavior constructed by the theory of planned behavior. *International Journal of Marketing*. 6(5): 119-132.

Yudistirani SA, Syaufina L, Mulatsih S. 2015. Desain Sistem pengelolaan sampah melalui pemilahan sampah organik dan anorganik berdasarkan persepsi ibu-ibu rumah tangga. *Konservasi*. 4(2): 29-42. doi: 10.24853/konversi.4.2.29-42.

Zen IS, Ahamad R, Omar W. 2013. No plastic bag campaign day in Malaysia and the policy implication. *Environment, Development and Sustainability*. 15: 1259-1269. doi: 10.1007/s10668-013-9437-1.

Zheng QJ, Xu AX, Kong DY, Deng HP, Lin QQ. 2018. Correlation between the environmental knowledge, environmental attitude, and behavior intention of tourists for ecotourism in China. *Ecology and Environmental Research*. 16(1): 51-62. doi: 10.155666/aer/1601_051062.