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How Eco-Conscious Choices are Shaping Generation Z'S Tumbler Market

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ABSTRACT: This study reveals how consumer and environmental trends are affecting Indonesia's tumbler market, emphasizing the eco-conscious habits of Generation Z. Environmental issues including pollution, deforestation, and climate change have made sustainable materials and methods even more important. As much as 105 Gen Z taken a role as a respondent in this study, by filled out a set of a questionnaire. As a result of product improvements that meet Gen Z's need for sustainability, the Indonesian tumbler industry has grown quite significantly. The study used a quantitative technique to examine how the marketing mix—which includes product, price, site, and promotion—affects the Generation Z's purchasing decisions of, who were primarily university students in various provinces in Indonesia. The results show that while price and location have less impact on purchasing decisions, product characteristics and advertising tactics do. Regression analysis supports the model's prediction power, while validity and reliability tests validate the power of measuring instruments. This study sheds light on how important strategic marketing is to attract eco-conscious customers and offers guidance to companies adjusting to Indonesia's growing green consumer culture.

Keywords: Generation Z, Buying Decision, Tumbler, Drinking Bottle.

INTRODUCTION

In recent years, numerous challenges have arisen within the global community concerning environmental matters, including pollution, deforestation, and climate change. Numerous elements are deemed responsible for environmental issues, including industrial and technological advancements. While the advancement of industry and technology yields beneficial effects, it also engenders detrimental consequences over time, resulting in environmental degradation and global warming (Mauliza et al., 2019).

The government and manufacturers are increasingly recognizing the necessity of utilizing recyclable and environmentally sustainable materials in response to the escalating waste volume. The Ministry of Environment and Forestry projects that Indonesia will generate 68.5 million tons

of waste in 2021, with 17%, approximately 11.6 million tons, originating from plastic waste. This occurrence has heightened public awareness on the necessity of environmental preservation. This also motivates commercial entities to seek methods for conducting industrial operations that do not hurt the environment(Allorante, 2018). As indicated by Katadata (2024) in Figure 1 below, domestic plastic trash generation is anticipated to rise from 2017 to 2025(Katadata, 2024). In 2025, plastic garbage creation is anticipated to attain 9.9 million tons, or 13.98% of the overall waste generation for that time. Indonesia is frequently identified as one of the top producers of plastic garbage globally and exhibits deficiencies in waste management(Dupont de Dinechin, 2022).

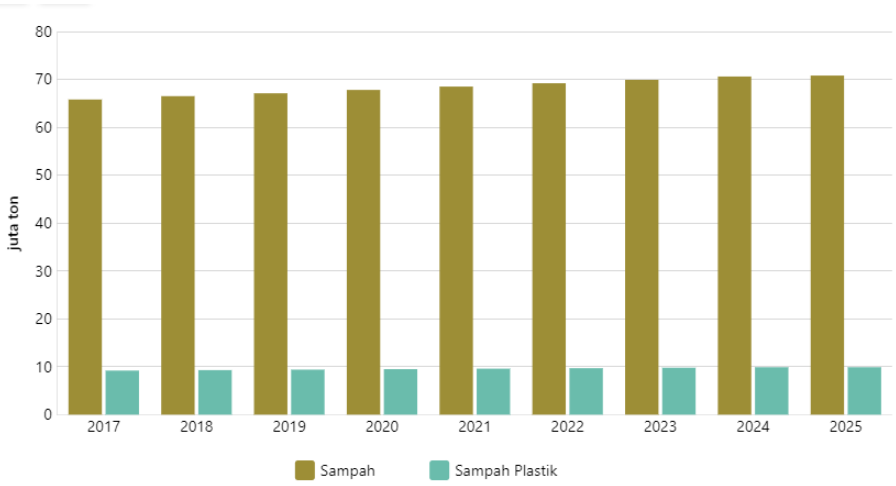


Figure 1. Domestic Plastic Waste

The United Nations Environment Program (UNEP) previously projected that plastic garbage entering marine ecosystems will nearly triple by 2040 without intervention to mitigate this pollution. The United Nations agency reported that plastic pollution was between 9 to 14 million tons in 2016. The volume of plastic pollution is projected to rise to 23-27 million tons by 2040. This statement was issued by the Director General of Waste, Waste, and B3 Management at the Ministry of Environment and Forestry.

The global consumerism movement, known as "green consumerism," involves the growing acknowledgment of individuals' rights to obtain products that are safe, suitable for consumption, and environmentally beneficial (Murniati & Widodo, 2024). Businesses and entrepreneurs actively respond to changing consumer conditions. This is viewed as both a challenge and an opportunity to meet customer needs and preferences. As a result, numerous businesses are attempting to engage customers through various strategies. One approach entails evolving into an organization that emphasizes community and environmental issues alongside profitability (Widyasari & Handayani, 2021). A tumbler serves as a product that encourages environmentally conscious consumer behavior (Söll-Tauchert, 2023). The drinkware market in Indonesia was valued at USD 1.2 billion in 2020 and is projected to grow at a compound annual growth rate (CAGR) of 8.9%, reaching USD 2 billion by 2026. The demand for drinking vessels in Indonesia has risen, attributed to increasing disposable incomes that enhance consumer interest in goods like mugs and glassware(Langfield et al., 2020; Stout, 2010). In conjunction with changes in lifestyle preferences, an increasing number of cafes, bars, hotels, and resorts in Indonesia are enhancing the sales of diverse drinkware items (Research, 2023).

To properly invest in the company's marketing efforts, modern marketing must examine consumer behavior in relation to environmental consciousness. According to the Doloitte Global 2022 Gen Z and Millennial Survey, 24% of Gen Z is typically worried about climate change. Furthermore, Gen Z buyers are primarily motivated by three shopping orientations: comfort, convenience, and value consciousness. When it comes to internet technology, this generation is quite adaptable, using it extensively for both production and consumption, and they have a tendency to buy for themselves(Andriyanty & Wahab, 2024). Moreover, research and development of more sustainable technology is fueled by consumer demand for environmentally friendly products. Investment in the study and creation of more sustainable technology is driven by consumer demand for eco-friendly goods. Corporate social responsibility is strengthened when purchasers choose environmentally friendly products (Firmansyah et al., 2019).

The current tumbler industry presents a wide range of products designed to meet diverse consumer preferences(Kamihori et al., 2024). The market's growth has been facilitated by the industry's increasing popularity. Anticipation of novel methodologies in tumbler production and continuous technological advancements is warranted. The combination of advanced features such as double-lock mechanisms, reliable sealing technology, and high-quality materials contributes to the popularity of food and beverage storage containers, particularly tumblers(Suzuki et al., 2014). The product is likely to maintain its status as the industry leader in the storage container category through continuous innovation and an emphasis on customer requirements. The successful integration of product dependability is likely to enhance the company's brand image (Andriyanty & Wahab, 2024).

Therefore, it is essential to investigate the preferences of a tumbler as one of the eco-products preferred, particularly those of Generation Z, through the lens of the marketing mix(Andriyanty & Wahab, 2024). Gen-Z consumers prefer to buy sustainable brands and are willing to pay an average premium of 10% for them. Because they were born into the digital era of mobile and internet technology, this group is known as "digital natives" (Borah et al., 2024). The marketing mix delineates managerial tools capable of influencing sales outcomes. The marketing mix, comprising product, price, place, and promotion, must be effectively implemented and comprehensively understood by businesses to maintain growth in a competitive market (Suhendra et al., 2016). Gen Z's upbringing has shaped their behavior, like other generations. Contemporary youth have been raised in an environment characterized by apprehensions regarding potential economic collapse, epidemic lockdowns, and environmental disasters. The internet became widely accessible around the time of the birth of the first members of Generation Z. The cohort that has matured with the internet integrated into everyday existence is referred to as "digital natives." The generation exhibits significant diversity; the youngest members of Gen Z are in their preteen years, whereas the oldest have established careers and mortgages(Kubíková & Rudý, 2024).

METHOD

This study employed a descriptive methodology wherein data was gathered under actual conditions, subsequently processed and analyzed, culminating in statistical representations that elucidate the collected data without extrapolating generalizations. The research population is defined as all Generation Z all over Indonesia, and 105 sample gathered who are already have an experience in buying drinking bottle or tumbler and answered the questionnaire regarding their decision making in buying the products(G. Chen et al., 2024; Su et al., 2019). Data gathering utilized online questionnaire which ease the respondents, who are digital native, to give their insight. Most of them are university students residing in various places in Java. The inquiries pertain to the marketing mix indications of a product and individual purchasing decisions influenced by the marketing mix(Acar et al., 2024; Q. Chen et al., 2024; Turner, 2018). The marketing mix comprises a set of controllable elements that enterprises can utilize to shape customer responses. The extensive array of marketing concepts was distilled into four marketing policies, known as the "4Ps," representing "product, price, place, and promotion."

This study utilized a quantitative research methodology to investigate the correlations between multiple independent variables (X1 Product, X2 Price, X3 Promotion, and X4 Place) and a dependent variable Buying Decision (Y)(Ribeiro et al., 2023). Data earned by distributing relevant questionnaires and applying Likert scale surveys, where the responses of strongly disagree, disagree, undecided, agree, and strongly agree correspond to the values of 1, 2, 3, 4, and 5, respectively, for all respondents. The secondary source also utilized books, journals, the internet, and periodicals. The data was evaluated using descriptive statistics (mean, standard deviation) and associative methods through linear regression analysis.

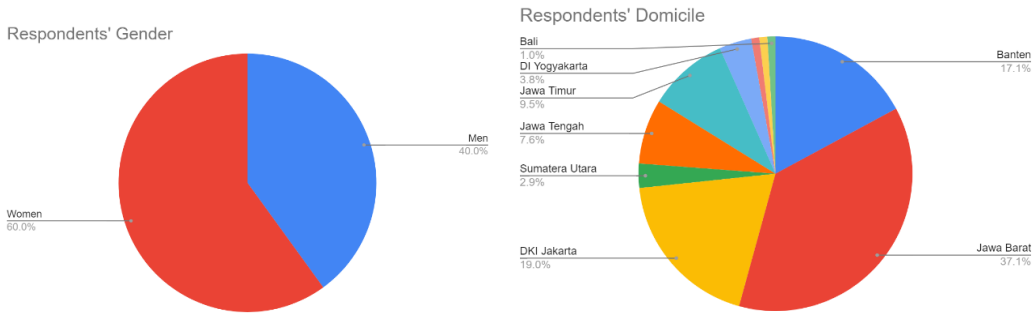
A standardized questionnaire was created, incorporating items for each variable, and assessed for validity and reliability to guarantee precise assessment. The validity test employed Pearson correlation to verify that each item corresponds with its intended construct, while reliability was evaluated by Cronbach's Alpha to demonstrate internal consistency. Multiple regression analysis assessed the impact of independent factors on the dependent variable, supplemented by t-tests and F-tests for significance evaluation. The Kolmogorov-Smirnov test was employed to verify the normality of residuals, thereby guaranteeing the model adhered to essential statistical assumptions. Statistical software facilitated data analysis, allowing for precise interpretation and comprehensive insights into the variables.

RESULT AND DISCUSSION

There is a definite preponderance of female participants, as seen in the first chart, which shows that 60.0% of the respondents are female and 40.0% are male. This gender disparity implies that young women from Generation Z are either more involved in or more likely to take part in this specific study. However, the even balance still shows how important both genders have been in helping to understand this generation's preferences and actions. The location of these respondents is examined in the second chart, which shows that Jawa Barat (37.1%), DKI Jakarta (19.0%), and Banten (17.1%) have the biggest percentages of respondents. This concentration in western

Indonesia, particularly in urban and suburban areas, might be the result of easier access to the survey or a bigger proportion of Gen Zers in these areas. Jawa Timur (9.5%), Jawa Tengah (7.6%), and lower amounts from Sumatera Utara (2.9%), DI Yogyakarta (3.8%), and Bali (1.0%) are other noteworthy regions. Geographic variety within the sample of Generation Z respondents is demonstrated by these distributions, which show that although the majority of respondents are from Java, there is still some representation from other islands and areas.

Figure 2. Respondents' Background



Validity Test

The validity test, a critical step in establishing the robustness of the research measurements, reveals that all items in the study are valid. An item is deemed valid if the calculated correlation coefficient, r, surpasses the table value of 0.1918. For variable X1 as seen on the table below, all items—X1.1 (0.808), X1.2 (0.749), X1.3 (0.804), X1.4 (0.813), X1.5 (0.819), and X1.6 (0.784)—exceed 0.1918, signifying that each item effectively measures the construct intended by X1.

Correlations

		X1.1	X1.2	X1.3	X1.4	X1.5	X1.6	TOTALX1
X1.1	Pearson Correlation	1	.439**	.631**	.638**	.595**	.581**	.808**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	105	105	105	105	105	105	105
X1.2	Pearson Correlation	.439**	1	.421**	.587**	.638**	.487**	.749**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	105	105	105	105	105	105	105
X1.3	Pearson Correlation	.631**	.421**	1	.537**	.622**	.634**	.804**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	N	105	105	105	105	105	105	105
X1.4	Pearson Correlation	.638**	.587**	.537**	1	.525**	.562**	.813**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	N	105	105	105	105	105	105	105
X1.5	Pearson Correlation	.595**	.638**	.622**	.525**	1	.515**	.819**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	105	105	105	105	105	105	105
X1.6	Pearson Correlation	.581**	.487**	.634**	.562**	.515**	1	.784**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	105	105	105	105	105	105	105
TOTALX1	Pearson Correlation	.808**	.749**	.804**	.813**	.819**	.784**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	105	105	105	105	105	105	105

**. Correlation is significant at the 0.01 level (2-tailed).

Similarly, variable X2's items (X2.1, X2.2, and X2.3) yield coefficients of 0.828, 0.774, and 0.840, respectively, all of which indicate strong validity.

Correlations

		X2.1	X2.2	X2.3	TOTALX2
X2.1	Pearson Correlation	1	.441**	.565**	.828**
	Sig. (2-tailed)		.000	.000	.000
	N	105	105	105	105
X2.2	Pearson Correlation	.441**	1	.477**	.774**
	Sig. (2-tailed)	.000		.000	.000
	N	105	105	105	105
X2.3	Pearson Correlation	.565**	.477**	1	.840**
	Sig. (2-tailed)	.000	.000		.000
	N	105	105	105	105
TOTALX2	Pearson Correlation	.828**	.774**	.840**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	105	105	105	105

**. Correlation is significant at the 0.01 level (2-tailed).

For variable X3, the coefficients for each item (X3.1: 0.793, X3.2: 0.714, X3.3: 0.859, X3.4: 0.843, X3.5: 0.845, and X3.6: 0.836) also exceed the threshold. The values range from 0.714 to 0.859, showing that each item reliably measures the intended facets of X3.

Correlations

		X3.1	X3.2	X3.3	X3.4	X3.5	X3.6	TOTALX3
X3.1	Pearson Correlation	1	.374**	.620**	.733**	.572**	.577**	.793**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	105	105	105	105	105	105	105
X3.2	Pearson Correlation	.374**	1	.491**	.517**	.674**	.490**	.714**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	105	105	105	105	105	105	105
X3.3	Pearson Correlation	.620**	.491**	1	.611**	.679**	.787**	.859**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	N	105	105	105	105	105	105	105
X3.4	Pearson Correlation	.733**	.517**	.611**	1	.606**	.644**	.843**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	N	105	105	105	105	105	105	105
X3.5	Pearson Correlation	.572**	.674**	.679**	.606**	1	.581**	.845**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	105	105	105	105	105	105	105
X3.6	Pearson Correlation	.577**	.490**	.787**	.644**	.581**	1	.836**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	105	105	105	105	105	105	105
TOTALX3	Pearson Correlation	.793**	.714**	.859**	.843**	.845**	.836**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	105	105	105	105	105	105	105

**. Correlation is significant at the 0.01 level (2-tailed).

Variable X4 also displays validity, as each item's coefficient (X4.1: 0.792, X4.2: 0.791, X4.3: 0.759, X4.4: 0.820, X4.5: 0.738) surpasses the table value. For the dependent variable Y, the items are similarly valid with coefficients of 0.844, 0.850, and 0.892 for Y1, Y2, and Y3, respectively.

Correlations

		X4.1	X4.2	X4.3	X4.4	X4.5	TOTALX4
X4.1	Pearson Correlation	1	.509**	.498**	.561**	.516**	.792**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	105	105	105	105	105	105
X4.2	Pearson Correlation	.509**	1	.389**	.687**	.474**	.791**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	105	105	105	105	105	105
X4.3	Pearson Correlation	.498**	.389**	1	.521**	.585**	.759**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	105	105	105	105	105	105
X4.4	Pearson Correlation	.561**	.687**	.521**	1	.369**	.820**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	105	105	105	105	105	105
X4.5	Pearson Correlation	.516**	.474**	.585**	.369**	1	.738**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	105	105	105	105	105	105
TOTALX4	Pearson Correlation	.792**	.791**	.759**	.820**	.738**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	105	105	105	105	105	105

**. Correlation is significant at the 0.01 level (2-tailed).

In summary, each variable—X1, X2, X3, X4, and Y—demonstrates high validity, affirming that these items are appropriate for measuring the constructs in question and providing a solid foundation for subsequent analyses.

Correlations

		Y1	Y2	Y3	TOTALY
Y1	Pearson Correlation	1	.557**	.653**	.844**
	Sig. (2-tailed)		.000	.000	.000
	N	105	105	105	105
Y2	Pearson Correlation	.557**	1	.636**	.850**
	Sig. (2-tailed)	.000		.000	.000
	N	105	105	105	105
Y3	Pearson Correlation	.653**	.636**	1	.892**
	Sig. (2-tailed)	.000	.000		.000
	N	105	105	105	105
TOTALY	Pearson Correlation	.844**	.850**	.892**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	105	105	105	105

**. Correlation is significant at the 0.01 level (2-tailed).

Reliability Test

Reliability testing, measured using Cronbach's Alpha, further supports the consistency of the measurement instruments. In this study, the Cronbach's Alpha value of 0.969 far exceeds the accepted threshold of 0.6, indicating a high level of internal consistency across the 23 items used. This high reliability coefficient suggests that the items within each variable consistently measure the intended construct, allowing for accurate and dependable results. The strong reliability value also enhances the study's overall credibility, as it indicates that similar results would likely be achieved if the measurements were repeated under similar conditions.

Case Processing Summary

		N	%
Cases	Valid	105	100.0
	Excluded[a]	0	.0
	Total	105	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.969	23

Regression Analysis

Regression analysis was conducted to assess the collective influence of the independent variables (X1, X2, X3, and X4) on the dependent variable Y. The results show an R value of 0.944, indicating a strong positive correlation between the independent variables and Y. This suggests that changes in X1, X2, X3, and X4 are closely associated with changes in Y. Additionally, the R Square value is 0.890, meaning that 89% of the variation in Y is explained by the independent variables. This high coefficient of determination indicates that the model is a good fit for the data and that the variables X1, X2, X3, and X4 substantially impact the outcome variable Y. The adjusted R Square of 0.886, which accounts for the number of predictors, further confirms the model's strength and appropriateness.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.944[a]	.890	.886	.731

a. Predictors: (Constant), X4, X2, X3, X1

t-Test

The t-test was applied to assess the significance of each independent variable in predicting Y. The t-test results for each variable reveal varying levels of influence. For X1, the t-value of 5.434 is greater than the critical value of 1.984, and the significance level is 0.000, which is below the 0.05 threshold.

t tabel : 1.984

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.497	.526		-2.849	.005
	X1	.295	.054	.517	5.434	.000
	X2	.064	.071	.058	.898	.371
	X3	.175	.051	.308	3.430	.001
	X4	.068	.080	.095	.851	.397

a. Dependent Variable: Y

This result indicates that X1 has a statistically significant positive effect on Y. Similarly, X3 has a t-value of 3.430, also exceeding the critical t-value, with a significance level of 0.001, confirming its significant influence on Y. In contrast, X2 and X4 do not have a statistically significant effect on Y, as their t-values (X2: 0.898, X4: 0.851) are below 1.984, with significance levels of 0.371 and 0.397, respectively. This finding suggests that while X1 and X3 are essential predictors of Y, X2 and X4 do not contribute significantly to changes in Y. The positive coefficients for X1 (0.295) and X3 (0.175) indicate that for each 1% increase in these variables, Y increases by 0.295 and 0.175, respectively. These insights suggest that focusing on variables X1 and X3 could yield the most substantial impact on Y.

F-Test

To assess the overall model fit, the F-test was conducted. The analysis produced an F-value of 203.045 with a significance level of 0.000, which is well below the 0.05 threshold. This result suggests that the combined influence of X1, X2, X3, and X4 on Y is statistically significant and that the regression model is suitable for predicting Y. The F-test supports the conclusion that the independent variables, when considered collectively, have a significant impact on Y, highlighting the validity of the overall model and confirming that the selected variables provide meaningful insight into Y's variation.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	433.535	4	108.384	203.045	.000[b]
	Residual	53.379	100	.534		
	Total	486.914	104			

a. Dependent Variable: Y
b. Predictors: (Constant), X4, X2, X3, X1

Normality Test

The normality test was conducted using the Kolmogorov-Smirnov test, which yielded a significance value of 0.082. Since this value is above the threshold of 0.05, we conclude that the residuals are normally distributed. This result satisfies the assumption of normality, which is a prerequisite for many statistical tests, including regression analysis. A normally distributed residual enhances the reliability of the model, as it suggests that the model's predictions and the residual errors are unbiased and consistent. This finding further validates the suitability of the regression model, as it meets the key assumptions of regression analysis.

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		105
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.71642231
Most Extreme Differences	Absolute	.082
	Positive	.082
	Negative	-.070
Test Statistic		.082
Asymp. Sig. (2-tailed)		.082[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

CONCLUSION

The marketing mix, which includes product, price, place, and promotion, must be effectively implemented and comprehensively understood by any businesses to maintain growth in a competitive market. Gen Z, who have grown up with the internet and digital natives, exhibits significant diversity in their behavior especially in buying a tumbler(Kokkinopoulou et al., 2024; Ribeiro et al., 2023). This study employed a descriptive methodology, involving 105 university students in Indonesia, to investigate the preferences of Generation Z through the lens of the

marketing mix. The research population consisted of all Generation Z in Indonesia, and the questions focused on the marketing mix indicators of a product and individual purchasing decisions influenced by the marketing mix.

The statistical analyses indicate that the measurement instruments used in this study are both valid and reliable. Variables Product (X1) and Promotion (X3) have significant effects on Buying Decision (Y), indicating that they play a crucial role in influencing the dependent variable, this is aligned with Mamo (2014) study, which explained about every indicators in product affecting the people buying decision(Mamo, 2014). This result is actually differ with a study conducted by Akbarullah & Silitonga (2016), which stated that the product quality is may not be a key factor in consumer purchasing decisions, as seen by the lack of considerable support for the association between product quality and decisions to buy. Conversely, Price (X2) and Place (X4) do not have a significant impact, suggesting that these variables may be less relevant or may interact with Buying Decision (Y) in a different manner. This is align with Akbarullah & Silitonga (2016) and Andriyanty & Wahab (2024) study, price perception and purchase decisions have a negligible association; this suggests that buyers may take other aspects into account when making decisions rather than price alone. Yet, the study by Andriyanty & Wahab (2024) revealed that their impression of the circular economy idea on purchase decisions moderates the significant and favorable association between the price factor of environmentally friendly products.

The overall model, supported by the F-test and high R Square value, is a good fit, explaining 89% of the variation in Y. The normality test further affirms the model's robustness by verifying that the residuals follow a normal distribution. These results collectively validate the study's model and provide actionable insights, particularly emphasizing the importance of focusing on variables X1 and X3 in any future interventions or analyses. Though, not all of the marketing mix indicators have an impact on Gen Z buying decision, it can be encompassing further research to reveal what are the reason behind it and find other determinants affecting their buying decision. To make research even better, it is preferable to include additional variables such consumer attitudes, brand image, environmental awareness, customer happiness, and customer loyalty. Moreover, Indonesia's tumbler market is still growing, and many people prefer to keeping up with the latest kind of tumbler(Wei et al., 2018).

REFERENCE

Acar, O., Yakupoğlu, Ö., Türker, A., & Etlioğlu, G. (2024). Evaluation of radioactivity and stable element contents in dam and drinking waters from Ankara province, Türkiye. *Journal of Radioanalytical and Nuclear Chemistry*, *333*(10), 4639–4649. https://doi.org/10.1007/s10967-024-09676-3

Allorante, L. T. (2018). FAKTOR-FAKTOR YANG MEMPENGARUHI KEPUTUSAN PEMBELIAN PADA TUMBLER STARBUCKS. *Analytical Biochemistry*, *11*(1), 1–5. https://doi.org/10.1007/978-3-319-59379-1

Andriyanty, R., & Wahab, D. (2024). DKI Jakarta Generation Z Green Product Purchase. *International Journal of Public Administration, Management and Economic Development*, *9*(1). https://doi.org/10.60026/ijpamed.v9i1.149

Borah, P. S., Dogbe, C. S. K., & Marwa, N. (2024). Generation Z's green purchase behavior: Do green consumer knowledge, consumer social responsibility, green advertising, and green consumer trust matter for sustainable development? *Business Strategy and the Environment*, *33*(5), 4530–4546. https://doi.org/10.1002/bse.3714

Chen, G., Chen, G., Li, J., Pan, Q., Liang, D., Qiu, J., Zhao, X., Wang, X., Li, Z., Li, X., Ma, X., Wu, S., & Sun, Y. (2024). Co-incineration of multiple inorganic solid wastes towards clean disposal: Heat and mass transfer modeling, pollutant generation, and machine learning based proportioning. *Green Energy and Resources*, *2*(3). https://doi.org/10.1016/j.gerr.2024.100086

Chen, Q., Wang, J., Su, Z., Tian, L., Huang, F., Liu, T., Graham, N., Li, G., & Yu, W. (2024). Per- and polyfluoroalkyl substances (PFAS) at low concentration improve coagulation efficiency but induce higher membrane fouling in drinking water treatment. *Environmental Pollution*, *363*. https://doi.org/10.1016/j.envpol.2024.125201

Dupont de Dinechin, B. (2022). SSA Form and Code Generation. In *SSA-based Compiler Design* (pp. 243–256). https://doi.org/10.1007/978-3-030-80515-9_18

Firmansyah, F., Purnamasari, P. E., & Djakfar, M. (2019). RELIGIUSITAS, LINGKUNGAN DAN PEMBELIAN GREEN PRODUCT PADA KONSUMEN GENERASI Z. *IQTISHODUNA*, *15*(1), 57–70. https://doi.org/10.1016/j.regsciurbeco.2008.06.005

Kamihori, M., Ito, K., & Itoh, Y. (2024). ThermoTumbler: A Tumbler-type Device that Changes Flavor Perception by Controlling Temperature to the Lower Lip. *Conference on Human Factors in Computing Systems - Proceedings*. https://doi.org/10.1145/3613905.3651072

Katadata. (2024). *Timbulan Sampah Plastik Indonesia Terus Meningkat Hampir Sedekade*. https://databoks.katadata.co.id/datapublish/2024/04/03/timbulan-sampah-plastik-indonesia-terus-meningkat-hampir-sedekade

Kokkinopoulou, E., Papasolomou, I., Vrontis, D., & Porcu, L. (2024). Co-creating Sustainable Buying Behavior Among Generation Z Consumers: The Role of Earned Media. *Springer Proceedings in Business and Economics*, 123–143. https://doi.org/10.1007/978-3-031-58429-9_8

Kubíková, Ľ., & Rudý, S. (2024). Attitudes of Generation Z Towards Sustainable Behaviour in Tourism. *TEM Journal*, *13*(2), 1116–1125. https://doi.org/10.18421/TEM132-26

Langfield, T., Pechey, R., Gilchrist, P. T., Pilling, M., & Marteau, T. M. (2020). Glass shape influences drinking behaviours in three laboratory experiments. *Scientific Reports*, *10*(1). https://doi.org/10.1038/s41598-020-70278-6

Mamo, Y. (2014). Influence of Bottled Water Packaging Attributes on Consumers' Purchase Decision: Case study in Addis Ababa. *Applied Microbiology and Biotechnology*, *85*(1), 2071–2079.

Mauliza, P., Fauzi, P. A., & Rini, E. S. (2019). *The Influence of Green Product, Green Advertising, and Green Brand on Decision to Buy Through Consumers' Trust in Tupperware Products at SMPN Beureunerun* (Vol. 6, Issue May, pp. 149–166).

Murniati, S. M., & Widodo, A. (2024). The Influence of Green Products on Purchase Decision Behavior in Generation Y and Z With Green Knowledge As an Intervening Variable. *Jurnal Aplikasi Manajemen*, *22*(1), 150–160. https://doi.org/10.21776/ub.jam.2024.022.01.12

Research, W. (2023). *Indonesia Drinkware Market Competition 2023*. https://www.6wresearch.com/industry-report/indonesia-drinkware-market-2020-2026

Ribeiro, M. A., Seyfi, S., Elhoushy, S., Woosnam, K. M., & Patwardhan, V. (2023). Determinants of generation Z pro-environmental travel behaviour: the moderating role of green consumption values. *Journal of Sustainable Tourism*. https://doi.org/10.1080/09669582.2023.2230389

Söll-Tauchert, S. (2023). Tumblers and ship-formed drinking vessels. *Du: Zeitschrift Der Kultur*, *925*, 70–75. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85183976341&partnerID=40&md5=1156092b5d5428e6da21af118484a9f2

Stout, C. (2010). Drinking up profits: Selling promotional drinkware. *Printwear*, *23*(10), 94–96. https://www.scopus.com/inward/record.uri?eid=2-s2.0-78751507492&partnerID=40&md5=5c00a492626f05bf6c3759fa80a71c08

Su, C.-H., Tsai, C.-H., Chen, M.-H., & Lv, W. Q. (2019). U.S. sustainable food market generation Z consumer segments. *Sustainability (Switzerland)*, *11*(13). https://doi.org/10.3390/su11133607

Suhendra, A., Prastyanto, D., & S., K. T. K. P. T. M. B. K. 2 M. P. I.-P. A. J. T. (2016). Pengaruh Marketing Mix Terhadap Keputusan Pembelian Toyota Avanza Tipe G Di Surabaya. *Jurnal Strategi Pemasaran*, *2*(1), 1–8.

Suzuki, C., Narumi, T., Tanikawa, T., & Hirose, M. (2014). Affecting tumbler: Affecting our flavor perception with thermal feedback. *ACM International Conference Proceeding Series*, *2014-November*. https://doi.org/10.1145/2663806.2663825

Turner, A. (2018). High levels of migratable lead and cadmium on decorated drinking glassware. *Science of the Total Environment*, *616–617*, 1498–1504. https://doi.org/10.1016/j.scitotenv.2017.10.164

Wei, Q., Kim, M.-J., & Lee, J.-H. (2018). Development of capacitive sensor for automatically measuring tumbler water level with FEA simulation. *Technology and Health Care*, *26*(S1), S491–S500. https://doi.org/10.3233/THC-174794

Widyasari, M., & Handayani, S. (2021). The Influence of Green Marketing and Environmental Knowledge on Buying Decision Through Buying Interest of LocknLock Customers. *UMY Grace Proceedings*, *1*(1), 501–514.